

REPORT

ON THE

FOREST ADMINISTRATION

OF THE

CENTRAL PROVINCES

FOR THE YEAR

1912-13

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No. 306-C., dated Delhi, the 13th March 1914.

File No. 91 of
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Serial No. 2.

From—The HON'BLE SIR EDWARD MACLAGAN, K.C.I.E., C.S.I., I.C.S., Secretary
to the Government of India, Department of Revenue and Agriculture,

To—The Hon'ble the Chief Commissioner, Central Provinces, Nagpur.

I am directed to acknowledge the receipt of Mr. Gordon's letter No. 142—XIV—8-11, dated the 16th February 1914, forwarding copies of the report on forest administration in the Central Provinces during the year 1912-13, together with the Chief Conservator's review and the resolution of the Chief Commissioner thereon.

2. The Government of India note with pleasure the steady progress in general forest administration, particularly as regards the expansion in communications, the progress in the provision of quarters for subordinates, the success of fire protection, which has been accompanied by a reduction in cost, and the very satisfactory financial results.

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Central Provinces Administration

FOREST DEPARTMENT

Nagpur, the 12th February 1914.

READ —

Reports of the Conservators of Forests on the Administration of the Northern, Southern and Berar Circles for the year 1912-13

Review by the Chief Conservator of Forests on Forest Administration in the Central Provinces for the year 1912-13

RESOLUTION

The financial success of the Department is fully evidenced by the Report of 1912-13. The surplus has risen from Rs. 7,52,861 to Rs. 11,78,372, or an increase of over 4 lakhs, while the excess over the average surplus for the quinquennium preceding 1910 is nearly six lakhs of rupees, and the percentage of net to gross revenue has risen from 27 for the quinquennium 1906-07—1910-11 to 29 in 1911-12 and to 38 in 1912-13. These figures go far to remove the reproach of excessive costliness, on a comparison of expenditure with income, which was not long ago brought against the Forest Department in these Provinces.

All Circles have shared in this satisfactory increase, but the Chief Commissioner notices with especial pleasure the recovery made in the Southern Circle, where, excluding grass operations for Bombay, expenditure rose by Rs. 8,571 only as compared with an increase of Rs. 2,41,398 in revenue. This satisfactory position must be considered as the beginning of the return due from the forests for a long period of nursing and care. The increase in communications has enhanced the value of forest produce, and with continued attention to this first necessity for satisfactory exploitation, the Chief Commissioner confidently expects in normal years a steady expansion of the surplus.

The reorganisation of the subordinate establishment has long been felt as a crying need of the Department, but has been delayed until forest revenues should show sufficient recovery to warrant the high expenditure involved. In view of the increased revenue and the financial position shown by the report of the current year, the Chief Commissioner has been able to submit for the approval of the Government of India orders giving effect to such parts of this long-required reform as relate to Forest Rangers and Forest Guards. The remainder of the scheme must be left over for a future occasion. The pay of the clerical staff also needs improvement, but this can probably be effected at small cost by a reduction in the number of clerks, accompanied by an improvement in the pay of the posts retained.

2. By far the most important contributories to the largely increased receipts are the returns received from timber and grazing, especially the latter. The increase in grazing receipts is due to the introduction of new rules and enhanced rates in the Central Provinces. This measure caused some dissatisfaction

among the people, and the total number of cattle which grazed in the districts under the new rules fell by 10 per cent. but the Chief Commissioner is fully prepared to accept the assurances of local officers that the new rates are not burdensome to the people. Even now the rate for *bond fide* plough-cattle is only from one to two annas, except in the seriously overgrazed Nagpur-Wardha forests and in certain areas of Nimar, where rates of three and four annas respectively are taken, and for these small sums a cultivator may graze an animal, if he so desires, for a whole year. But there is one important matter, in connection with the grazing rules, to which the attention of district officers has been especially directed, and which the Chief Commissioner desires to bring again to their notice, and that is the necessity of ensuring that the people thoroughly understand the rules; if they are not properly understood by the villagers, the result is to place undesirable power in the hands of low-paid subordinates.

The Conservator, Southern Circle, brings to notice that at present concessions are based on the number of working ploughs, irrespective of area, and that this gives an opportunity for patwaris to abuse their position by showing an altogether fictitious number of working ploughs as possessed by cultivators. The matter is receiving the attention of the Administration.

3. The average incidence per head for grazing was 2.6 acres over the Province as a whole, the highest incidence being, as usual, in Berar, where in the C Class areas it was less than one acre. It might have been expected that, in Berar at any rate where the grazing incidence is so high, the policy of "cheap grass and dear grazing" would have fostered the practice of laying in fodder for stall-feeding. But the experiments, which were continued again in conformity with the orders in last year's Resolution, were somewhat disappointing in all three Circles. In the Damoh District the Agriculture Department gave advice as to the species of grass to be pressed, but out of 96 tons cut and 71 baled, only 4½ tons baled and 8 tons loose were sold to agriculturists. In the Southern Circle the results were better, but only 2 tons were sold to agriculturists, the remainder being disposed of elsewhere. In the Berar Circle the results were more satisfactory, and 174 tons were disposed of to agriculturists as against 476 to others. Progress, however, in the introduction of an innovation of this kind must necessarily be very slow, and the Chief Commissioner does not think that the outlook is so unpromising as the Chief Conservator of Forests would appear to think. It must be remembered that even if the operations do not bring in a good financial return, still they repay the expenditure laid out on them, and if by degrees the cultivator can be brought to see the advantages of the system, a good deal will have been achieved, and he will have one more weapon in his armoury for defence in times of scarcity. The Chief Commissioner considers that the matter is deserving of further experiment.

4. Good progress was made during the year with the demarcation of boundaries, particularly in Saugor, where in the last three years a great deal of useful work has been done in rectifying unsuitable boundaries by exchanges of forest with privately owned areas. In this way, without any appreciable loss of forest areas, boundary lines have been reduced by 90 miles and 1,136 pillars eliminated. The Chief Commissioner thinks that there must be scope in many other districts for measures of this kind, which result in a saving of expenditure on the maintenance of boundaries, and of trouble to the villagers whose lands are adjacent to the forests. In Berar good progress has been made in the disforestation of the small C Class areas, which are not worth administering as Government forest, but are useful as additions to the village grazing grounds.

No working-plans were published during the year, but orders were passed on the reports of the special Revenue Officers in connection with the Nimar, Chhindwara and Bilaspur Plans. Pending the revision of the Melghat Working-plan, which is now in progress, special steps have been taken to ensure that the inhabitants of the recently disforested villages in the Melghat shall continue to receive the forest concessions which they were formerly granted.

5. The expenditure on communications rose by Rs. 29,949, three-fourths of the excess being due to the construction of new works, chiefly in the Berar Circle. No less than 210 miles of regular cart roads were constructed with numerous other coupe and feeder roads, and 234 mile of alignments were effected. The construction of these works should do much to open up the forests and exploit inaccessible tracts such as the Sonewani Range in Balaghat or the South Sihawa Range in Raipur. The difficulties of crossing the Wainganga river in Chanda, which have hitherto prevented the proper exploitation of the Allapilli teak-forest, are now being met by the construction of a substantial causeway by the Public Works Department at a cost of Rs 35,000.

The outlay on tanks and wells fell by Rs. 10,000 during the year. It is reported that few, if any, tanks are required in the Southern Circle for watering cattle, but in the Berar Circle wells are urgently required. The experiment of building temporary bunds as was done in Nimai, should afford useful results, and the Chief Commissioner would like to see it continued. At the same time, Mr. Crump agrees with the Chief Conservator that it may well be worth while to construct more permanent bunds. If suitable sites are available, permanent barrages of water-ways will probably be cheaper, in the long run, than temporary operations which have to be annually renewed.

6. There has once more been a most satisfactory decrease in the number of fire cases, which have fallen by 30 per cent, due no doubt in some part to the character of the season and the early rainfall. The number of offences under other heads has, however, risen but it would appear that under the head "unauthorised killings" there has been an increase rather of cases reported than of actual offences. As might have been expected from the introduction of the new grazing rules, cases of unauthorised grazing have increased; but as the people become accustomed to the new rules, this tendency should disappear, and it may be hoped that the increase is only temporary. In Berar the scarcity of fodder apparently led people to graze their cattle in closed areas with the hope of escaping detection. As pointed out by the Chief Conservator, to assess compensation in such cases at a figure little higher than the fine recovered at a cattle-pound is directly to encourage offences; if the offender escapes detection, he gets his grazing free; if he is caught, he is no worse off than if his cattle had been sent to the pound. The penalty assessed should, therefore, be sufficiently high to be a real deterrent.

7. The Chief Commissioner congratulates the Department on the satisfactory working of the year, and his thanks are due to Mr. Hart and Mr. Hill for the continued efficiency shown in the administration of the Department, and to the other officers whose names have been brought to his notice.

ORDER.—Ordered that a copy of this Resolution be submitted to the Government of India, Revenue and Agriculture Department, and that a copy be forwarded to the Chief Conservator of Forests, and to the Conservators of Forests, Northern Circle, Southern Circle, and Berar Circle, for information and guidance; also, that it be published in the Supplement to the *Central Provinces Gazette*.

J. HULLAH,

Third Secretary to the Chief Commissioner,

Central Provinces.

REPORT
ON
FOREST ADMINISTRATION
IN THE
CENTRAL PROVINCES AND BERAR.
FOR THE YEAR 1912-13.

CHAPTER I.

CONSTITUTION OF STATE FORESTS.

SECTION I—ALTERATION IN AREAS (FORM No 7).

NORTHERN CIRCLE.

1. Form No 7 shows the changes in forest areas during the year, the net result being a decrease of 1,821 acres or 2.8 square miles in the total area which was 7,357 square miles as against 7,354 at the close of the preceding year.

2. The details are as follows:—

Mandla (North and South) Division.—The area was reduced by 990 acres due to correction of errors in previous years.

Jubbulpore-Narsimhpur (old) Division.—The area was increased by 20 acres in the Dhanwahi range which had been left out by the survey party.

Damoh. Fifty acres were disforested in exchange for an equal area of the malguzari land afforested during the year, the net difference being *nil*.

Saugor.—In all 739 acres were added and 1,319 excluded, the net result being the decrease of 580 acres. The details of changes are (1) 19 acres were added and 4 deducted due to correction of area in accordance with the figures of forest surveys, (2) 48 acres were excluded in conformity with the notification for disforestation issued as far back as 1896 which was overlooked at the time and in succeeding years, (3) area of the Rahatgarh block was reduced by 464 acres in order to form a separate block, which now constitutes a new block and (4) 103 acres were disforested in exchange for 256 acres of malguzari land in order to improve the forest boundaries. For the purpose of effecting this improvement a special officer (Mr. Sarwate, Extra-Assistant Conservator of Forests) has been deputed since October 1912. In that direction great improvement has been effected within the past three years since the existing boundary lines have been reduced by 90 miles and no less than 1,136 pillars have been dismantled.

In the Hoshangabad Division, although the malguzari villages of Indpura and Singoria, purchased during the year, have been handed over to the Forest Department, yet their acquisition was not formally notified during the year.

Seoni.—Fifty-nine acres were excluded and 7 added owing to the rectification of boundaries with reference to the settlement maps. Also 17 acres were deducted as a notification of disforestation issued in 1902 was discovered to have been overlooked. The net result was a reduction in area of 69 acres.

Chhindwara.—The total area was reduced by 202 acres, *viz*, by disforestation 204 acres as wrongly included in the reserved forests and 9 acres in exchange for 11 acres of the malguzari forests to improve the existing boundary.

B-I Class.

3. This class of forests is restricted to the Mandla and Chhindwara Divisions and was not affected by any change during the year. Steps have, however, already been taken with a view to disforest the whole of the area in the Mandla Division and the greater portion of it in Chhindwara, as it consists entirely of regularly settled ryotwari villages.

SOUTHERN CIRCLE.

4. The net results of the changes during the year as exhibited in Form No. 7 show a net decrease of 23,790 acres or 37 square miles. Under A Class forest 9,046 acres were afforested for the first time and 7,235 acres disforested mostly on account of exchange of area. An area of 6,497 acres was transferred from B Class to A Class and 1,575 acres of A Class forest transferred to the charge of the Irrigation Department. The total increase in A Class forest amounted to 13 square miles. Under B Class forests 615 acres were added during the year, 26,216 acres were disforested, making a decrease of 50 square miles or a total decrease in the forests, under charge of the Department, of 37 square miles.

BERAR CIRCLE.

5. The total area of Government forests of all classes in the Circle stood at 6,255 square miles at the close of the year as compared with 6,682 at the commencement, thus giving a net decrease of 427 square miles.

In Berar proper the A Class forests show a net gain of 806 acres. In *Amraoti* 648 acres were transferred from C Class as being suitable for the formation of permanent babul bans. In *Buldana* 70 acres were afforested to improve the boundary and extend the cultivation of Palasdhag forest village. In *Yeotmal* two areas aggregating 86 acres were obtained by exchange with some H Class lands, while 20 acres were reduced by correction of area on resurvey. In *Akola* three areas aggregating 38 acres were afforested in part exchange for an area of 50 acres in order to get rid of internal cultivation and to improve boundaries, while two acres were required for the construction of the Murtizapur-Yeotmal Railway and were disforested.

6. In B Class forests no changes occurred.

7. In C Class forests the net decrease amounted to 36 square miles: the details being as follows :—

In *Amraoti* 684 acres of babul bans were transferred to A Class, as mentioned above, and 8,054 acres in small blocks of less than 160 acres each were disforested for village free grazing lands. In *Buldana* 11,002 acres in small blocks were disforested for free grazing and 24 acres were disforested in exchange to improve the boundary, while 244 acres were received by transfer from Akola Division for convenience of management. In *Yeotmal* 5,344 acres were received by transfer of several villages from the Akola Division for administrative reasons, 427 acres were added and 331 acres lost in various blocks by correction of area on resurvey. In *Akola* 12 acres were afforested in exchange as part of the transaction mentioned under A Class, 3,510 acres in small blocks were disforested principally for free grazing areas while, as mentioned above, 244 acres were transferred to Buldana and 5,344 acres to Yeotmal for administrative reasons. Of D Class 6,760 acres in *Akola* were disforested principally for free grazing areas.

Good progress was made in carrying out the policy of disforesting small blocks of C Class forest, thus removing a cause of considerable trouble to the people and difficulty in administration. Proposals for similar disforestments in the Morsi taluq of Amraoti were submitted during the year but had not received sanction before its close. Proposals for Yeotmal are under preparation and will be submitted shortly. When these are approved and notified this work will be complete for Berar and the forests will have attained the figure of area at which they will stand permanently.

In *Nimar* the area of A Class increased by 1,651 acres owing to recalculation of areas. Of B-I Class 169,530 acres were formally disforested for ryotwari settlement which system had been fully established in this area, and 459 acres were deducted by recalculation of area. In Betul 6,632 acres of A Class and 69,394 acres of B-I Class were disforested for ryotwari settlement, 2,562 acres were transferred from B-I to A Class, and 18 acres were added to B-I Class by recalculation of areas.

The disforestment of A Class was merely an adjustment of areas in Form No. 7. The actual plots disforested were those originally proposed for excision, but when they were finally handed over to the Revenue authorities their areas as ascertained by a detailed survey differed considerably from those which had been entered in the returns of this Department and consequently considerable adjustments were needed between A and B-I Classes. In Betul 4,981 acres remain for disforestment which will be performed when the plots are sufficiently settled to be taken over by the Revenue Department.

SECTION 2.—FOREST SETTLEMENT (FORM No. 8).**NORTHERN CIRCLE.**

8. '13, '4 and '01 square miles were finally settled, respectively, in the Damoh, Saugor and Chhindwara Divisions, and 2'68, '45, 2'08, '35, '28 and '34 square miles still remained under settlement at the close of the year in the Mandla, Damoh, Saugor, Jubbulpore-Narsinghpur, Seoni and Chhindwara Divisions. The Deputy Commissioner was the Settlement Officer in all cases.

The final notification constituting as reserved forests '35 square miles of unsettled area, referred to in the last Administration Report, was not issued although the settlement has been completed.

'24 square miles under settlement in the Hoshangabad Division appear to have been previously constituted reserved forests and action is, therefore, being taken to cancel the present notification.

'28 square miles shown under settlement in the Seoni Division and referred to in the last report, were required to improve the condition of fire protection in the Ugli range and after the principal malguzar had eventually come to terms his action was opposed by some of his shareholders who do not seem inclined to arrive at an agreement. It became necessary, therefore, to acquire the land but it has not yet been finally notified as reserved forest.

SOUTHERN CIRCLE.

9. Fair progress was made in the work of settling a large number of comparatively small areas. There were two cases involving 35 acres in North Chanda and Nagpur-Wardha which had been shown as outstanding for over a year.

The area of 32 acres in Khutunda (North Chanda Division) has been shown apparently by error as under settlement for the last 18 years, but it was decided as far back as 1896 that it was undesirable to afforest this area, which has accordingly been excluded from Form 8 of the current year.

10. The Deputy Commissioner, Chanda, recommends the partial retransfer of certain excised areas to the Forest Department especially in the Garchiroli tahsil. These areas are apparently not occupied by proper villages and some of the cultivation is merely nominal in order to obtain grazing for herds of pastoral tenants of malguzari villages. This abuse is being put a stop to, but he urges the desirability of the examination of these areas by a competent Revenue Officer.

BERAR CIRCLE.

11. '11, '13 and '08 square miles were finally settled in Buldana, Yeotmal and Akola, respectively, while '09, 6'68 and '72 square miles were taken in hand and were in process of settlement at the close of the year in Yeotmal, Akola and Betul. In all cases the Deputy Commissioner was the Forest Settlement Officer.

In addition to the above, the provisions of the Land Acquisition Act were resorted to for the acquisition of 3'55 acres in Betul to rectify a boundary, the cost of the acquisition being Rs. 99-4-9, but further proceedings for the forest settlement of the plot were not instituted before the close of the year.

The necessary proceedings under the Land Acquisition Act were instituted in respect of various plots to be afforested in Yeotmal and Akola, but were not brought to the stage at which the forest settlement procedure could be put in motion within the year.

SECTION 3.—DEMARCATIION (FORM No. 9).**NORTHERN CIRCLE.**

12. Form No. 9 gives the details of work done and expenditure incurred under this head.

13. The details of classification of work done on the boundary lines are as follows:—

	Miles.
(1) Length of lines over which all pillars have been put into thorough repair. ...	1,174
(2) Length cleared without reference to fire protection ...	5,709
(3) Length checked with survey maps ...	1,661
(4) Number of pillars repaired ...	8,915

14. A five years' scheme of boundary works was prepared for Jubbulpore, Damoh, Hoshangabad and Chhindwara, and sanctioned during the year. The Jubbulpore scheme has been kept pending until the revision and simplification of boundaries, in conjunction with the revision settlement of the district, is completed.

15. The demarcation of new boundaries occurred in Mandla, Saugor and Chhindwara Division only. In Mandla it was undertaken with a view to settle boundary dispute and in Saugor and Chhindwara it was necessitated by the exchange of Government forests with the malguzari areas as also by the establishment of two new forest villages in the latter Division. The work covered 36 miles in length and the total cost was Rs. 137. The whole of this was spent in the Saugor Division, the other two having done it without expense. Four pillars were newly erected in Damoh, 7 in Chhindwara, 62 in Saugor and 5 in Seoni, in the former two without cost and in the latter two at a cost of Rs. 40 and Rs. 1 respectively. 1,169 pillars costing Rs. 613 were reconstructed in the Saugor Division. Owing to the transfer of areas to the malguzari, 467 pillars were dismantled in the Saugor Division at a cost of Rs. 27, and 15 in Chhindwara and 29 in Damoh without cost. The total expenditure incurred on new works under this head amounted to Rs. 818. Besides this 34 were spent on the survey of boundaries but the amount was wrongly charged to A-VIII-c.

16. 5,709 miles of boundary lines were cleared during the year for Rs. 4,713. This includes 139 miles in the Chhindwara Division cleared without cost, material having been given in exchange for wages. In addition 741 miles were cleared with reference to fire protection and the cost was wrongly debited to demarcation. Rs. 123 were spent on widening lines 105 miles in extent, including 31 in the Seoni Division, for which material was removed in lieu of cash payment.

17. 8,915 boundary pillars were repaired at a cost of Rs. 2,624 and in addition 17 were spent on petty repairs to 54 pillars in the Seoni Division. Of these 62 pillars in the Chhindwara Division were repaired by Forest Guards. The above item also includes Rs. 252 expended on replacing the wooden posts of 593 pillars by stone slabs in the Jubbulpore Narsinghpur Division. The total cost on old works amounted to Rs. 7,477.

18. In the Saugor Division the elimination of superfluous pillars and renumbering the rest was done completely in Blocks Nos. 43—48, 50, 69, 98 and 24 and the work in other blocks is in progress.

19. The revision and resurvey of many of the boundaries in the Hoshangabad Division again could not be undertaken during the year as no officer was available for the purpose.

SOUTHERN CIRCLE.

20. The details of work done and expenditure incurred under this head will be found in Form 9.

21. The details of classification of work done on the boundary lines are as follows:—

	Miles.
(1) Length of lines over which all pillars have been put into thorough repair. ...	1,844
(2) Length cleared without reference to fire protection ...	2,340
(3) Length checked with the survey maps ...	1,632
(4) Number of pillars repaired ...	9,243

22. The five years' scheme of check of boundaries has been drawn up and submitted for the Bhandara, South Chanda and Nagpur-Wardha Divisions. The scheme for Bilaspur and Balaghat appears to have been worked up to, but has apparently been lost sight of in the case of the North Chanda and Raipur Divisions.

The condition of the boundaries in the last named leaves a great deal to be desired and may necessitate the employment of surveyors in the following cold weather.

23. The annual clearing of boundaries, where they are not kept up for fire protection, entails considerable expense. In some cases boundaries are supposed to be kept up by raiyots or malguzars under the terms of their leases, but this is not always done. It is probable that if one half or one quarter only of the boundary was taken in hand and cleared annually, in those areas which are open to grazing or not under special fire protection, the maintenance of all boundaries would be well assured.

BERAR CIRCLE.

24. The details of work done and the expenditure incurred are shown in Form No. 9. The total length of boundaries at the close of the year amounted to 14,524 miles which great length is due to the existence of large numbers of small forest blocks in Berar.

Last year the total length of boundary in Nimar was erroneously shown in Column 8 of Form 53 as 640 miles only; the figure is now correctly given as 1,365, after careful check with the maps.

The details of work done on boundary lines are as follows:—

	Miles
(1) Length of lines repaired thoroughly ..	990
(2) Length cleared without reference to fire protection ..	904
(3) Length checked with survey maps ..	482
(4) Number of boundary pillars repaired ..	No. 5,131
and in Berar Division	
Warlies repaired ..	10,351
Gotas repaired ..	279

25. The five years' scheme of repairs to boundaries was worked up to in all Divisions except Betul with a deficit of 26 miles.

SECTION 4.—FOREST SURVEYS (FORM No. 10).

NORTHERN CIRCLE.

26. No surveys were undertaken by the Survey of India party during the year, two maps on the scale 1"=4 miles (of Saugor and Seoni) were published during the year; one of Damoh, was in press and one of Hoshangabad was in an earlier stage of preparation.

27. The total expenditure incurred on the constitution of State forests amounted to Rs. 28,690 against Rs. 8,603 of the preceding year.

SOUTHERN CIRCLE.

28. With the exception of surveys by local officers of forest villages in a few divisions, no work under this head was done during the year. A good deal of survey work remains to be done in mapping afforested areas in the Balaghat and Bhandara Divisions, as well as roads and fire lines in the Raipur and North Chanda Divisions.

29. The total expenditure incurred on the constitution of state forests amounted to Rs. 8,313 against Rs. 8,328 of the preceding year.

BERAR CIRCLE.

30. No. 6 Party (Southern Circle), Survey of India, continued the topographical survey of Berar. In Yeotmal, where the survey is now completed, 124 square miles were surveyed, in Akola 97 square miles and in Buldana 154 square miles, all on the scale of 2"=1 mile. Besides the above plane table surveys of

boundaries on the scale of 4"=1 mile were carried out over 380 linear miles in Akola and 605 linear miles in Buldana. No charges for this survey are debited to the Forest Department.

In the Melghat Division the interior detail of 44 forest villages was surveyed at a cost of Rs. 699.

No other expenditure on regular surveys was incurred, the balance of expenditure incurred being due to the cost of maps supplied.

31. The total expenditure on the constitution of State forests was Rs. 23,505 of which Rs. 15,557 was paid to the Melghat Rajas as compensation for forest rights.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

SECTION I.—REGULATION OF MANAGEMENT (FORM No 11).

(a) PREPARATION AND CONTROL OF REGULAR WORKING PLANS.

NORTHERN CIRCLE.

32. *New Plans.*—The revised plan for the Chhindwara Division was prepared and finally submitted by the Forest Divisional Officer by the end of the year and was forwarded to the Chief Conservator of Forests after its close.

33. *Old Plans.*—The provisions of the sanctioned working plans were adhered to as far as circumstances permitted. As heretofore the prescriptions of the working plan had to be abandoned over a greater portion of the Korai and Ganginala ranges for want of demand. Only one felling series in the Damoh Division remained unworked during the year (as was also the case last year) as the road required to open it up could not be constructed during the year by the Public Works Department.

A rough scheme of working for the Khanat sal forests in the South Mandla Forest Division is reported to have been prepared by the Forest Divisional Officer (but not submitted) during the year on the lines prescribed by the Chief Conservator of Forests.

In the Saugor Division the prescriptions of the existing working plan were slightly modified under the orders of the Chief Conservator of Forests (as stated in the last report) by a reduction in the minimum number of standards to be retained under the coppice with standard system from 50 to 30 per acre. This has enabled a large proportion of useless material to be removed and increased the revenue at the same time. A new working scheme for the Garhakota reserve has been sanctioned and is to be introduced from the year 1913. In the Hoshangabad Division the amended working plan in respect of the bamboo working in the Rahatgaon and Magardha ranges was followed. For want of a purchaser for the coupes of the Bori reserve the provisions of the revised working plan as regards fellings could not be followed. Four out of the eight felling series in the Sohagpur range still remained unworked but, as explained in the last report, this is of little consequence as the produce is of low value. The improvement fellings elsewhere were carried on on the same lines as in the previous year and the intensity of working was more in accordance with the working plan and the views of the Chief Conservator of Forests expressed in 1911. The dual system of marking certain species for felling and certain for reservation has been given up as unsatisfactory (as was explained in the preceding year's report) and the old system of marking for felling was resumed.

SOUTHERN CIRCLE.

34. *New Plans.*—There are three divisions, namely, Balaghat (part), Bhandara and South Chanda (part) in which recently sanctioned revised working plans are now in force over 126,533 and 73 square miles respectively. Revised

working plans of Nagpur-Wardha and South Chanda Divisions are still in the press and though they have not been formally sanctioned their prescriptions are being carried out. The revision of the Bilaspur working plan was completed during the year by the Divisional Forest Officer and the orders of Government on the Revenue Officer's report are awaited, pending which sanction has been obtained to putting the revised provisions into force.

Old Plans.—The work of revising working plans in the Balaghat (part) and Raipur Divisions was continued during the year, Messrs. Carr and Townshend being specially appointed Working Plans Officers for the purpose. Some delay is likely to be caused in both divisions, but more particularly Raipur, owing to the maps of these forests not having been kept up to date in the past as regards boundaries, roads and fire-lines.

An officer was appointed to prepare a revision of the North Chanda working plan but comparatively little progress was made as he had shortly after to take charge of the division. The supply of forest produce in this division is almost twice the demand, so that there is no great urgency in revising the present working plans which are not altogether unsuitable. The forests moreover are in a somewhat doubtful position owing to possible disforestments for irrigation projects in the future, and little progress has been made in mapping internal roads and fire-lines which are normally used as bases for boundaries of felling series and coupes. This work preliminary to the working plan will be taken in hand.

The 307 square miles shown in Column 6 against South Chanda, the area comprising the Sironcha range, has been transferred to Column 7. Owing to unlimited commutation, browsing by goats and a very poor soil, this range is almost devoid of forest vegetation so that the preparation of a working plan may well be deferred until such time as the effect of Government orders putting a stop to these practices can be seen.

BERAR CIRCLE.

35. Working plans were in various stages of preparation in six out of the seven divisions

In *Melghat* Mr Donald collected information in the new reserves at the beginning of the season until he was transferred to the Imperial Forest College in February. Mr. Mason carried on the work for a few days in April, when he was also transferred, after which, until the end of the year, no officer was available for this work.

In *Amraoti* the field work was completed and a beginning made of the writing of the plan.

The *Buldana* plan was completed and sent to press during the year.

Mr. Malcolm on relief from charge of the division made a beginning on the field work for the *Yeotmal* working plan, for which the general lines were laid down after consultation with the Chief Conservator of Forests on tour in the division.

The *Akola* plan has not yet been completed.

The *Nimar* plan was sent to press during the year.

Old Plans.—The provisions of the old plans in force were worked up to as far as possible. In the Penganga reserve, owing to absence of demand and inaccessibility of the forest, fellings were in deficit. In Betul also fellings were in deficit in places owing to want of demand. This condition, however, may be expected to improve with the opening of the Itarsi-Badnur Railway. In this division the 10 felling series in the Dabka and Sawalmendha ranges were reconstituted and three felling series in the most accessible parts were formed, the remainder of the forests, where experience has shown a complete absence of demand, being thrown into the unworkable area.

(b) PRELIMINARY WORKING PLAN REPORTS.

NORTHERN CIRCLE.

36. No preliminary reports were submitted during the year. As explained in the last report the necessity having arisen in the Seoni Division for the revision of the existing working plan, data are being collected for a preliminary report. In the meanwhile, however, a scheme of fellings for the ensuing years was sanctioned provisionally.

SOUTHERN CIRCLE.

37. No preliminary reports were submitted during the year.

BERAR CIRCLE.

38. A preliminary report for the Melghat Division was submitted and approved during the year.

(c) PLANS OF OPERATIONS.

NORTHERN CIRCLE.

39. These were adhered to with few exceptions:—

Mandla.—The programme of road construction and cutting back operations could not be fully worked up to for want of labour. The most important deviation was the unforeseen collection of harra departmentally in certain ranges, as no adequate offer was received for the purchase of the leases.

SOUTHERN CIRCLE

40. These follow on approved working plans and were carried out as far as the demand for forest produce and funds allotted for expenditure admitted of this being done.

The demand in most divisions is beginning to catch up with the supply available under the old working plan prescriptions, but there are still many inaccessible areas from which, owing to the want of communications, forest produce cannot be exported.

BERAR CIRCLE

41. The sanctioned plans were generally worked up to without material deviations.

In Buldana the building of the Purna range quarters at Khamgaon had to be abandoned owing to an unexpected difficulty about the site.

The construction of the Wasali-Chunkheri road proved more expensive than anticipated and progress made was consequently less than proposed.

In Yeotmal the building of range quarters at Darwha was retarded owing to labour difficulties consequent on the approach of railway construction absorbing all skilled labour. The construction of three wells was postponed as suitable sites could not be found. On the other hand the construction of the Yeotmal-Rauldari Road, not anticipated in the Annual Plan of Operations, was carried out under proper sanction with funds obtained from the special grant for road making.

SECTION 2.—COMMUNICATION AND BUILDINGS (FORM No. 12).

(a) ROADS AND BRIDGES.

NORTHERN CIRCLE.

42. Eighty-two miles of regular cart roads were constructed at a total cost of Rs. 18,450 including Rs. 736 spent on account of pay of establishment. Greater portion of this amount was usefully expended in the Hoshangabad Division where alone Rs. 10,680 were devoted to roads 36 miles in extent. Thirty-two miles of feeder roads were also made for Rs. 828 and four miles of Inspection-paths (in the Mandla Division only) for Rs. 25; alignment and road trace work covered 172 miles costing Rs. 1,371. Thus Rs. 20,674 were expended on new works.

43. As noted last year, Bori-Bagra road is the most important of all and the expenditure incurred on its seven sections is summarised below :—

In the Bagra-Paraspani section the only work done was widening the curves and the dangerously narrow portions extending only over 5 chains costing Rs. 24.

Of the Paraspani-Pathai section the excessive gradients were reduced over a length of 4 miles. This section is now complete.

Rs. 17 were expended in completing the Denwa-Kharpalar ghat over the Pathai-Khapa section and nala crossings were improved and excessive gradients reduced at a cost of Rs. 75 over the Khapa-Kareli section which is now complete.

A nala crossing was improved over the Kareli-Churna section and further improvement is being done this year out of the special grant allotment.

A further sum of Rs. 75 was spent on the Churna-Dhain section in improving the nala crossings and removing projecting boulders. It is also proposed to effect further improvements in straightening the road, metalling sandy stretches and reducing gradients at nala crossings out of the special grant.

The remaining portion of the Harrapala ghat (2 miles) over the Dhain-Bori section was completed for Rs. 762. Further improvements are contemplated, the cost of which will be met from the special grant.

The construction of the Churna-Sakot and Sakot-Kesla roads was continued as was that of Ari-Denwa taken up. The former two have been mentioned in the last report as the continuation of the Bori-Dhain-Churna section of the road and the latter as an improvement to the Khapa-Bagra section, whereby the distance is decreased by 4 miles. On 4 miles of the first road (Churna-Sakot) Rs. 701 were spent during the year and it is now practically complete. Only Rs. 323 were spent on the second of the above roads, *viz.*, Sakot-Kesla, chiefly on the ghat to the Tawa river. A portion of this road passes through malguzari land which has to be acquired before the construction can be undertaken. A large proportion of the special allotment is proposed to be devoted to the above three roads, which require improvements on the river and nala crossings and in reducing gradients and straightening curves and metalling stretches of sandy portions.

The other roads in the same division for which funds are provided for from the special grant are Bori-Babhai and Koreamla-Suakachar roads over which Rs. 171 (for 6 furlongs) and Rs. 368 (for 3 miles) have respectively been spent during the year. The first road is to facilitate extraction of timber from Coupes 1 and 2 of Jholi felling series, and the second that of bamboos from the Malni tract, by floating them down the Denwa and Tawa rivers to Bagra.

The special grant alluded to above is for 1913-14 and amounts to Rs. 21,700 and is not to be confused in the extra grant of Rs. 13,500 for the same year distributed over all the other divisions.

In the same division, besides the above, the construction of (1) Ratakhans ghat (1 mile, cost Rs. 505), (2) Sarangpur-Keria (1 mile, cost Rs. 440), (3) Jijajideo Madikho (4 miles, cost Rs. 1,100), (4) Dhekna-Lakartalai (6 miles, cost Rs. 1,553), (5) Banspani-Khumi (6 miles, cost Rs. 1,544), and (6) Bori-Mahukhal roads (5 miles, cost Rs. 1,604) was also undertaken. The first four will prove very useful by giving easy access to the forests. The last two roads will with some extensions open up, respectively, the whole of the west and east of the Rabetgaon range. The last named road is likely to become one of the most important roads in the division. It may also be noted that for the Banspani-Khumi road Rs. 1,400 were allotted out of the special grant of Rs. 5,000 sanctioned by Government during 1912-13.

44. In the Saugor Division the cart roads referred to in the last report were completed by an extension of $2\frac{1}{2}$ miles costing Rs. 160 and these have considerably increased the value of the teak growing areas of the Rehli range. A new and important road was also commenced from Suakatha-Kheri in the Deori range and Rs. 316 have been spent over nearly $\frac{1}{2}$ a mile of it. From the special grant Rs. 2,300 have been allotted to it.

45. In the Damoh Division Rs. 2,909 and in the Chhindwara Division Rs. 3,334 were spent respectively over 18 and 14 miles of cart roads. The Chhindwara figure includes Rs. 3,000 (covering 9 miles) allotted out of the special grant of Rs. 5,000 referred to above. Other roads in the other divisions are not of sufficient importance to be detailed here except that in the Seoni

Division Rs. 405 were spent (on $\frac{3}{4}$ of a mile) out of the allotment made from the above noted grant.

46. Besides the above Rs. 828 were spent on feeder roads 32 miles in length. 172 miles of alignment and road trace work was also done in all divisions (except Jubbulpore-Narsinghpur and Seoni). Of these 172 miles no less than 110 were in the Hoshangabad Division.

47. The total amount spent on repairs to cart and feeder roads, etc., was Rs. 6,312 covering 864 miles in extent.

48. The total expenditure on new work and repairs amounted to Rs. 26,986.

SOUTHERN CIRCLE.

49. The expenditure under roads was Rs. 38,388 as compared with Rs. 29,502 in the previous year. Of this Rs. 23,881 was spent on new work and Rs. 14,507 on upkeep; nearly the whole of which was spent in the construction and repair of export cart roads. Of new work Rs. 14,647 was spent in the Balaghat, Bilaspur and Raipur Divisions. Considerable progress was made in the Balaghat Division where 13 miles of road were constructed against 4 miles in the previous year and 7 miles of new alignment laid out in addition. The principal work was the opening out of the Sonawani range to afford feeder roads to the new branch of the Bengal-Nagpur Railway which is extending into the forest to tap manganese deposits. The roads will open up large tracts of magnificent bamboo forest hitherto little worked and enable timber and bamboos to be exported by rail to Nagpur, Wardha and other large towns on the Great Indian Peninsula Railway. The question of the future construction and extension of these feeder roads is intimately bound up with railway traffic which as usual was held up owing to wagons not being supplied in sufficient quantities to exporters of timber and bamboos.

Considerable progress was also made in the Bilaspur Division where 13 miles of cart roads were made at a cost of Rs. 4,261 compared with 6 miles constructed in the previous year. This included the construction of portions of the Lamni-Keonchi road, the metalling of $1\frac{1}{2}$ miles of the Mahraji-Zirano road and the completion of the Karidoneri-Boerha road. In Raipur the principal work was the continuation of the Mohdi-Nagri road for extraction of forest produce from the Sihawa range. Without roads to tap these somewhat inaccessible areas it will be impossible to carry out the exploitation contemplated under the plan now being revised. Other important works are the Nawagaon-Bhandak road in the North Chanda Division on which Rs. 2,278 was spent for improvements, such as construction of culverts, laying a foundation of gravel on the clayey portions and the casing of gradients at river crossings; the Kanhargaon-Wamanpalli road in the Dhaba range of South Chanda Division on which Rs. 1,806 was spent during the year, this road taps practically the whole Dhaba block connecting with the Allapalli Public Works Department main road. The more expensive forest roads are being constructed by the Public Works Department after approval by the Civil authorities. This is undoubtedly useful where roads pass through malguzari lands or form connecting links between cultivated tracts of country, but it is difficult to obtain approval to the construction of roads which are used purely for the extraction of forest produce. In Balaghat the Deputy Commissioner objected to the construction of a forest road which ran parallel with a Public Works Department main road at a distance of some three miles from it. It was not apparently realised that as a rocky ridge separated the Public Works Department road from the suggested forest road that the former road was of no use for extracting timber from the valley up which the forest road had been aligned. In consequence of this objection the road had to be taken off the schedule of Public Works Department projects in the near future. A forest road though sometimes useful to the general public is often only wanted for the export of forest produce pure and simple.

50. This was not used during the year and will not be of use until the construction of the Weinganga causeway is completed.
Road tractor. The establishment has been dispensed with and the tractor laid up under the orders of the Local Administration.

51. Many of the roads in this Circle, as noted above, go to feed the railway and much forest produce is exported from the Balaghat, Bhandara and Chanda Districts to the rich but treeless plains of Wardha and Eastern Berar. The railway line from Nagpur towards Bombay was being doubled during the year. It is expected that this work will be finished in about another year's time when the congestion of traffic should be removed.

BERAR CIRCLE.

52. The expenditure on roads was Rs. 31,924 as compared with Rs. 15,696 in 1911-12. New work cost Rs. 20,862, 54 miles and 56 chains of regular cart roads were constructed at a cost of Rs. 11,127 and 9 miles 76 chains of roads not completed cost Rs. 9,141. Rs. 352 were spent on making 22 miles of coupe and feeder roads, Rs. 97 on the alignment of 42½ miles of roads and Rs. 147 on making 3 miles 30 chains of bridle paths.

53. Repairs cost Rs. 11,062. Rs. 10,436 being spent on 1,214 miles of cart roads, Rs. 599 on 316½ miles of bridle paths and Rs. 27 on 14 miles of dragging paths.

54. The heaviest expenditure on new works was incurred in Buldana Rs. 8,254, Akola Rs. 5,500, and Nimar Rs. 4,760. In *Buldana* Rs. 3,202 were spent on continuing the Chunkheri-Pingli road which is now nearly completed and with a small further expenditure should be open for traffic by next December. Rs. 4,169 was spent on a part of the Wasali-Chunkheri road. Unfortunately a considerable sum was wasted here as the Divisional Officer at the time made one section unnecessarily elaborate, and on the next section abandoned the original alignment without due consideration, the consequence being that the construction is cut off from the following section by a reef of rock to pass which will entail very heavy expenditure on blasting. It has since been decided to complete the construction of this road by the agency of the Public Works Department. In *Akola* 14¼ miles on five ghat roads were constructed at a cost of Rs. 3,700 to the departmental funds in addition to a contribution of Rs. 1,000 from the District Board. The roads which were inspected by the Conservator were well laid out and constructed and will facilitate traffic both from the forests and for the general public. In *Nimar* the new works consisted in making diversions and easing gradients on existing cart tracks in the forests. The old roads so called in Nimar are perhaps the worst in the Circle and even more money might advantageously be spent to open up the interior of the Chandgarh, Piplo and Kalibhit Ranges. Labour difficulties, however, are great and the programme has had to be cut down in order to avoid the wholesale desertion of forest villagers. The importation of labour gangs appears the obvious solution, but the climate of these forests is so poisonous to outsiders, for a considerable time after the rains, that such gangs cannot be permanently employed.

55. In all divisions the difficulty of obtaining a supply of labour and its high cost when obtained is complained of; the only exception was Buldana where many coolies came from Khandesh seeking employment owing to the failure of the food-crops. In Betul it is hoped that with the completion of railway construction this difficulty will be lessened, but in Yeotmal it will become even more acute as railway construction is extending into the district.

In the Melghat the formation of the new reserves will necessitate a considerable amount of road construction in the near future and general alignments for some of the more urgently needed roads have already been decided on. Here again the labour difficulty in unhealthy forests with a thin Korku population will be pronounced and the work can only progress slowly.

Repairs to roads were heaviest in Melghat, Rs. 3,780 and Betul Rs. 2,923. In Amraoti Rs. 980 was paid by agreement as a contribution to the District Board for the upkeep of the Amraoti-Pohora road.

(b) BUILDINGS.

NORTHERN CIRCLE.

56. The following permanent buildings were entirely constructed during the year :—

Range Officers' quarters	...	...	1
Range Assistants' quarters	...	...	1
Forest Guards' nakas	...	...	21
Forest Guards' temporary nakas	...	...	9
Out-houses to Range quarters	...	..	1

Besides the above one Range Assistant's quarters was purchased in the Damoh Division for Rs. 225. Also the compound walls to one Range quarters, and one Range Assistant and Range Moharrirs' quarters in the Mandla Division were constructed for Rs 300.

The following temporary buildings were also constructed in the Mandla Division :—

Stables and out-houses	...	...	3
Inspection huts	...	...	2
Quarters for Range Moharrir and orderly	...	...	1

57. The following buildings that could not be completed last year were completed during the year :—

Rest-houses	...	...	2
Range Assistants' quarters	...	...	1
Range Moharrirs' quarters	...	...	3
Forest Guards' nakas	...	...	5
Mahauts' quarters	...	...	1
Out-houses to rest-house	...	.	1

Besides these, additions to two rest-houses costing Rs. 378 were made.

58. The following buildings were partly constructed during the year :—

Rest-houses	...	...	3
Range quarters	..	...	1
Range Assistants' quarters	..	...	3
Forest Guard's nakas...	...	...	14

59. On the above work Rs. 15,293 were expended in all during the year.

60. An expenditure of Rs 6,445 was incurred on repairs to buildings including Rs. 31 expended on katcha huts in Hoshangabad. Besides, Rs. 294 were paid to malis and for dismantling of nakas, etc., in the Hoshangabad and Mandla Divisions.

61. The total outlay on these works was Rs. 22,032.

SOUTHERN CIRCLE.

62. The expenditure on buildings during the year amounted to Rs. 32,317 as compared with Rs. 27,963 during 1911-12. Rs. 22,724 was spent on new works.

63. The new office for the South Chanda Division was completed and occupied and the foundations of the new residential quarters for the Bilaspur Divisional Officer were laid during the year.

Rest-houses 64. The following rest-houses were completed during the year :—

Division.		Name.
Bhandara	...	Out-houses to Bheokhidki Rest-house.
Bilaspur	...	Lamni Rest-house.
Nagpur-Wardha	...	Nagalwari and Panjra Rest-houses with out-houses. Out-houses to Sylari Rest-house.

Raipur	...	Kitchen and out-houses to Borai Rest-house
Balaghat	...	Out-houses to new Rest-house at Supkhar was commenced

Subordinates' quarters, 65. The following were constructed or completed:—

Division		Name
Balaghat	...	Range Assistants' quarters at Dhansua and Balkari. One additional room to Range Moharirs' quarters at Raihar. 6 Forest Guards' nakas
Bhandara		Range Assistants' quarters at Kosumtondi and Digori. Out-houses to Range quarters at Sangaihi. 8 Forest Guards' nakas.
Bilaspur		Range Officers' quarters at Baloda.
North Chanda	...	Range Assistants' quarters at Junona and Keljar. 4 Forest Guards' nakas
South Chanda	..	Range Clerks' quarters at Kothari, Depot Jamadar's quarters at Ballarshah. 4 Forest Guards' nakas.
Nagpur-Wardha	...	Range Assistants' quarters at Bazargaon. Out-houses to Range quarters at Umrer. Out-houses to Range Assistants' quarters at Heora, 1 Forest Guards' naka.
Raipur	...	Range quarters at Sihawa for South Sihawa Range Officer. 6 Forest Guards' nakas.

And quarters were commenced at the following places:—

Division.		Name.
Balaghat	...	Range Assistants' quarters at Supkhar. 1 Forest Guards' naka
Bhandara	...	4 Forest Guards' nakas.
Bilaspur	...	Range Assistants' quarters at Lamni and Gindola. Range Officers' quarters at Bilaigarh.
North Chanda	...	Range Assistants' quarters at Warora and Rajoli.
South Chanda	..	5 Forest Guards' nakas
Raipur	...	2 Forest Guards' nakas.

66. Rupees 1,198 were spent on the construction of petty buildings in connection with the Forest School at Balaghat. A sum of Rs 40,000 has been placed at the disposal of the Public Works Department for extensions to the school buildings to provide a new school room, hospital and quarters for Assistant Instructor, Curator, Sub-Assistant Surgeon and 25 students.

School and Museum.

A sum of Rs. 9,020 has been sanctioned for show cases, etc., for the Museum.

BHAR CIRCLE.

67. The expenditure on buildings was Rs. 20,476 on new works and Rs. 10,952 on repairs, as compared with Rs. 14,078 and Rs. 10,485, respectively, in the previous year.

68. Under new works the Mehdari rest-house with its out-houses in Amraoti Division was completed for Rs 441. At Singad in Yeotmal Division a rest-house partly built by the Public Works Department was taken over and its construction continued at a cost of Rs 2,711.

Of Subordinates' quarters the following were completed :—

Melghat.—Six guards' quarters and 28 temporary huts.

Amraoti.—Seven guards' quarters, two out-houses to Range Officers' quarters and one temporary hut.

Buldana.—One temporary hut.

Yeotmal.—One Range Officer's, two Range Assistants', four guards' quarters and seven temporary huts.

Akola.—One Range Officer's quarters.

Amravati.—Two Range Officers', one Range Assistants, two guards' quarters, two out-houses to Range Officers' quarters and 13 temporary huts.

Betul.—One Range Assistant's, one guards' quarters, four temporary huts.

Total cost Rs. 12,464, while Rs 3,845 was spent on quarters uncompleted at the close of the year.

69. Under repairs, Rs 1,577 were spent on Head-quarters houses; Rs. 2,875 on 42 Rest-houses, Rs 5,277 on 458 Subordinates' quarters and Rs. 1,223 on 136 other buildings.

The housing of subordinates is still in a very backward state in some Divisions. A satisfactory standard plan for Range Officers' quarters has been adopted and an experiment to decide on a suitable plan for Range Assistants is in progress, but the housing of the lower subordinates is a difficult question. The best guards deserve to be provided with proper accommodation especially in unhealthy tracts, and such provision would possibly assist recruitment, but it has been found very difficult to design a plan giving sufficient accommodation of substantial structure that is not very expensive.

(c) MISCELLANEOUS WORKS.

NORTHERN CIRCLE.

70. Four wells were constructed during the year at a total cost of Rs. 1,154, *viz.* : one in Saugor (Rs. 579), two in Hoshangabad (Rs. 421), and one in Seoni (Rs. 154). Three wells left incomplete last year were completed during the year for Rs. 131. Rs. 2 were in addition required for a well already shown as completed in Mandla. 9 wells were left incomplete at the close of the year, the amount spent on them being Rs. 950, out of which amount, however, Rs. 50 were eventually recovered after the close of the year in the Seoni Division as the work was not approved of.

In addition to the above, Rs. 55 were paid to a contractor in Mandla in settlement of his claims for a well.

71. For the last section of the useful Patesur Tank in the Seoni Division Rs. 1,152 were expended which completes the work. The site selected for the Kahani Tank in the same Division and referred to in the last Report was, on further consideration and by inspection of the site, rejected as unsuitable and of doubtful utility.

Thus Rs. 3,444 were spent on new works under this head in addition to which Rs. 900 were disbursed as the pay and travelling allowance of the Public Works Department Overseer and his establishment deputed on tank works.

72. Under repairs Rs 1,911 were expended. The details of work are as follows:—

Ten tanks cost Rs. 443); 65 wells (Rs. 807); 12 Jhirias (Rs. 44); clearing, fencing, etc., of compounds of Rest-houses, Subordinates' quarters, Rest Camps, &c Rs. 617)

73. On the whole Rs 6,255 were spent under this head

74. Of the tanks of the Gango Division referred to in the last Report, the leaks of the Chheola Buleh tank rather increased although efforts were made to stop them. The tank nevertheless holds water throughout the year. The Pavrai tank continues to leak as much as ever and was practically dry by January. As for Netra tank some drains were dug to increase its catchment area, but the result is yet to be watched. The renovation of the Piparkheri Tank project was not completed by the Public Works Department Overseer.

75. The total outlay under Head A-VII during the year under report compares as below with that for the preceding year —

Year	A-VII-a	A-VII-b	A-VII-c	Total
1	2	3	4	5
	Rs.	Rs.	Rs.	Rs.
1911-12	22,151	22,108	5,352	49,611
1912-13	26,986	22,032	6,255	55,273

SOUTHERN CIRCLE

76. The expenditure under this head was Rs 15,323 as compared with Rs. 16,370 spent last year. Of this, Rs. 9,130 was spent on new work and Rs. 6,193 on repairs, etc.

77. Rs. 3,703 were spent on new work and Rs. 2,430 on repairs. The bund of the Nagjhirri tank (Bhandara Division) noted in last year's Annual Report burst owing to its not being built sufficiently high above the level of the waste-weir. This was repaired and the tank completed during the year at a cost of Rs. 3,461, the total expenditure amounting to Rs. 6,440. The bund of the tank was in order at time of writing this report. No new tanks were commenced during the year, but programmes for the construction of tanks in waterless areas were called for. As such areas are usually far from human habitations, very little is known about them or their suitability from the point of view of tank construction. In the Chanda and Balaghat districts tanks are mainly constructed for irrigation purposes, the forests being on the whole very well provided with natural pools suitable for watering cattle even in the driest weather. It is however improbable that few if any tanks are required in this Circle for watering cattle. Some three-quarters of the forests are open to fairly heavy grazing throughout the rainy season, so that comparatively little grass exists after the close of the monsoon except in the temporarily closed coupes and tanks made in such areas would cease to be of value when these coupes in their turn were thrown open to grazing during the rainy season.

78. Rs. 3,637 were spent on new work and Rs. 988 on repairs to wells.

New wells were constructed during the year as follows:—

5 in Balaghat, 2 Bilaspur, 1 North Chanda, 10 South Chanda, 3 Nagpur-Wardha, and 2 Raipur.

DERAR CIRCLE

79. The expenditure under A-VII-c was Rs 14,624 as compared with Rs 24,756 in 1911-12

80. In Nimar Rs. 2,385 were spent on completing the Karwani Tank and in Betul Rs 200 on repairs to the waste-weir channel of Ladi Tank. 29 new wells were constructed or completed at a cost of Rs. 5,715, while Rs. 1,435 was spent on 9 wells still incomplete. In Akola 3 troughs for watering cattle at wells were built for Rs 160 Rs. 236 was spent on trial pits for 5 wells. In Nimar, at the instance of the Revenue authorities, 19 temporary bunds were thrown across nalas to hold up water in anticipation of a greatly increased demand for grazing during the hot weather One similar bund was made in Yeotmal. The cost was Rs. 680 and Rs. 30, respectively.

81. Repairs to 93 wells and 17 *ghiras* cost Rs. 2,117. Compounds of 104 buildings were cleaned at a cost of Rs. 1,173, and 23 were fenced for Rs 213 The Overseer on the Kharran Tank cost Rs 65 and other miscellaneous charges were Rs 215.

The following statement displays the work done in constructing and repairing wells —

Division	Wells completed		Wells in progress.		Wells and ghiras deepened and repaired.	
	No	Cost	No	Cost	No	Cost.
1	2	3	4	5	6	7
		Rs		Rs		Rs
Melghat	10	175	1	13	25	45
Amraoti	...	...	...	..	10	190
Buldana	2	607	2	514	15	442
Yeotmal	7	2,184	4	780	12	205
Akola	3	1,165	...	...	14	175
Nimar	4	1,104	1	48	29	942
Betul	3	390	1	80	4	118
Total	29	5,715	9	1,435	109	2,117

SECTION 3.—PROTECTION OF FORESTS (FORM No. 13).

(a) GENERAL PROTECTION.

NORTHERN CIRCLE.

82. The Forest offences of the year are compared below with those of the preceding year:—

	Average of three years.	1911-12.	1912-13	Increase or decrease.
1	2	3	4	5
1. Injury by fire	273	217	136	-81
2. Unauthorized felling	1,611	1,548	1,810	+ 262
3. Unauthorized grazing	1,084	975	1,255	+ 280
4. Other offences	53	61	76	+ 15
Total	2,921	2,801	3,277	+ 476

83. The total number of cases for the year under report were thus in excess of those for the preceding year, as also of the average for the preceding three years by 476 and 356, respectively.

Under "Injury by fire" there appears a decrease of 81 cases as compared with the preceding year and of 137 as compared with the average. There is an appreciable increase in the Mandla Division only and a slight increase in Jubbulpore Narsinghpur, all the other Divisions showing decreases. The increase in Mandla is attributed to the extension of the fire protection operations to the Khannat Forests and the decrease in other cases to the early and frequent falls of rain.

Under "Unauthorized felling" the increase is noticeable in all the Divisions, except Saugor, and is ascribed to better vigilance on the part of the staff in the matter of detecting offences. In Mandla the Divisional Forest Officer attributes the increase of cases to more complete reporting rather than to any actual increase of cases during the year.

Under "Unauthorized grazing" only two Divisions, *vis*, Jubbulpore-Narsinghpur (13) and Seoni (19) show some decrease which is attributed to no action having been taken in the former Division against offenders in the Dhanwahi Range (of the old Jubbulpore Division) as the people were unaccustomed to the new rules, and in the Seoni Division to suspending all action against offenders until the end of August 1912, by which time they were permitted to take out licenses under the new rules. All the other Divisions show an increase in cases under this head, prominently the Damoh (114) and Chhindwara (109) Divisions and in a lesser degree Saugor (67), attributable to the tendency of the people to evade the new rules.

Under "Other offences" the increase is restricted to the Mandla, Saugor, Seoni and Chhindwara Divisions, each showing only a slight difference and in general attributed to illicit cultivation and shooting in the Reserved Forests.

84. The number of cases decided by courts was 83 against 93 in the preceding year, and the percentage of convictions was 76 against 77.

The punishments awarded by Courts are reported to be adequate in all Divisions except Chhindwara, where the Divisional Forest Officer does not, in general, seem to be satisfied with the attitude of the Magistrates who, he says, give expression to their own opinions rather than administer the Forest Act, as it stands, while on the other hand the Forest staff are not sufficiently versed in the law. The District Magistrate has, however, taken action in the matter. The same Divisional Forest Officer brings to notice another difficulty, *vis*, that of the situation of the three Ranges in respect of the Tahsil jurisdictions, each of them lying partly in one and partly in another Tahsil—a drawback which makes it almost impossible for a Range Officer to attend to two different cases in two different Tahsils at nearly the same time, the head-quarters of which are 34 miles apart and 40 to 44 miles from any Range head-quarters. The above fact added to the delays in the Court cases arising from different causes seriously affects the more legitimate work of the Forest staff. The District Magistrate, it is further stated, has, however, issued orders to group cases and this may give some relief.

85. The number of cases compounded by officers authorized to do so under the provisions of the Forest Act was 2,851 against 2,542 the average of the preceding three years; and the number of persons involved was 7,693 against 7,042. The average amount of compensation taken was Rs. 3-1-4 against Rs. 2 12-7 per head and Rs. 8-5-1 against Rs. 6-4-1 per case.

86. There were 201 cases undetected—80 under "Injury by fire", 92 under "Illicit felling" and 29 under "Unauthorized grazing" against an average of 277 of the previous three years.

SOUTHERN CIRCLE

87. The forest offences of the year compare with those of preceding years as follows:—

Nature of offence	Cases of 1911-12	Cases of the year	Average of past three years	Increase or decrease	Percentage of total cases
1	2	3	4	5	6
1. Injury by fire	110	57	135	51	4
2. Unauthorized felling &c	1,339	1,112	1,330	8	55
3. Unauthorized grazing	982	1,119	856	263	41
4. Other offences	57	35	56	1	1
Total	4,488	2,593	2,350	213	

Except in the Nagpur-Wardha Division there has been an increase in all Divisions of cases of unauthorized grazing which is generally attributed to the greater vigilance of the forest staff. The decrease in the number of cases of injury by fire is due to the greater precautions taken to prevent fire and partly to early rain in some Divisions. In Bilaspur the decrease in cases of deliberate incendiarism is reported to reflect great credit on the tact of the Ranger of the Pantora Range. There were 105 new cases of the year taken into Court compared with 98 in 1911-12 of which, including 9 cases pending at the commencement of the year, 102 cases were disposed of, leaving a balance of 12 cases pending at the close of the year. In 77 out of 102 cases convictions were obtained, there being 25 acquittals during the year compared with 30 during 1911-12. Over half the acquittals occurred in the Raipur Division whereas in the previous year the Nagpur-Wardha Division headed the list. The incidence is somewhat remarkable, some individual Divisional Forest Officers do not appear to use sufficient discretion before sending cases up to Court as to whether the evidence is good enough to ensure conviction or not. Sentences appear on the whole to have been adequate.

88. There were 2,384 cases during the year in which the offenders agreed to compound for the damage done by them to the forests against 2,262 cases in 1911-12, 2,075 in 1910-11, the number of persons involved being 8,178.

The average amount accepted was Rs. 8-2-0 per case and Rs. 2-7-0 per person against an average in the last three years of Rs. 6-11-11 per case and Rs. 2-1-10 per person. Compensation varied from Rs. 1-3-7 per head in North Chanda to Rs. 3-15-9 per head in Balaghat. The incidence in Nagpur-Wardha having fallen from Rs. 4-6-0 to Rs. 2-0-0 per head, this again is undoubtedly due to the individual idiosyncrasy of the officer in charge.

BERAR CIRCLE

89. The Forest offences of the year and the number of cattle impounded are compared with previous figures in the following statement:—

Nature of offence.	Average of three years	1911-12	1912-13	Percentage of total cases.
1	2	3	4	5
1. Injury to forest by fire	80	47	37	1
2. Unauthorized felling, or removal of produce	1,144	1,202	1,595	33
3. Unauthorized grazing	2,287	2,168	2,676	56
4. Other offences	201	220	485	10
Total	3,702	3,637	4,793	
Number of cattle impounded	4,621	4,743	6,035	

90. The number of cases dealt with rose by 1,156 or 32 per cent as compared with the previous year, the principal increases being 39 in Melghat, 452 in Buldana, 576 in Yeotmal and 78 in Nimar. In the Melghat restrictions are being introduced on the removal of produce from the newly constituted A Class reserves which must necessarily result in the increase of offences of unauthorized removals of produce. The increase, however, from 52 to 67 is small and shows that the restrictions have not been enforced with undue severity on the Korku population. With the constitution of the new Reserves as A Class a beginning has also been made to treat cases of grazing without licenses after 31st July as forest offences instead of as formerly merely charging double dues under the C Class grazing rules. In Buldana the large increase of 216 under unauthorized grazing is due to the scarcity of fodder which led the people to graze their cattle in closed areas with the hope of escaping detection. Of unauthorized removals of produce the increase of 65 was due to the same shortage of fodder which tempted people to thefts. The same cause led to the increase of 254 cases of illicit grazing in Yeotmal, while the rise of 270 cases of unauthorized removals of produce is attributed to greater strictness in enforcing the restrictions on the felling of teak in C Class forests, which is very necessary to prevent the complete destruction of teak in these areas. In Nimar the rise is due to greater strictness in dealing with unauthorized fellings.

The decrease in the number of fire cases is attributable to the scanty growth of grass owing to short rainfall and the heavy grazing in all forests which greatly reduced the quantities of inflammable material.

The increase in the number of other offences was found mainly in Buldana and Yeotmal where the checking of boundaries in preparation for survey operations brought to light a very large number of petty encroachments on the forests.

91. The total number of cases compounded was 4,586, involving 11,931 persons as compared with 3,546 cases and 9,221 persons in the previous year. The total compensation accepted was Rs. 27,607-14-1, or Rs. 6-0-4 per case and Rs. 2-5-0 per person as compared with Rs. 5-2-4 per case and Rs. 1-15-8 per person. A large number of the cases are very petty, but there is no doubt that the rate of compensation taken might well be stiffened especially in Yeotmal where offences are very numerous, and the people not materially poorer than in the rest of Berar, while the rate of compensation accepted there is only about half of the average for the whole Circle.

92. Of cases taken into Court, 5 were pending from the previous year, and there were 70 new cases. Of 72 cases completed convictions were obtained in 62 or 86 per cent and 3 remained pending at the close of the year.

All Divisional Officers report that the sentences imposed by Magistrates were adequate. The most important case prosecuted was that of a timber contractor in Nimar who felled unmarked trees in his coupe and was sentenced to 6 months rigorous imprisonment. This conviction and punishment has contributed largely to a serious decrease in the amounts bid for coupes in the current year. There is no doubt that it will have a salutary effect on the working of lessees for some time to come.

93. Rules for the regulation of timber and fuel in transit in Yeotmal District were prepared with the concurrence of the Commissioner, Berar, and notified shortly after the close of the year. They should lessen the possibility for illicit removals which have been a subject of complaint from that district.

(b) PROTECTION FROM FIRE (FORM NO. 14).

NORTHERN CIRCLE.

94. The area attempted to be protected during the year was 1,971,486 acres or 3,080 square miles as compared with 1,753,272 acres or 2,740 square miles of the preceding year. The difference (218,214 acres) is due to more areas having been brought under protection in all Divisions (except only in Saugor where the area was reduced by 1,922 acres under the new scheme). The chief increase was in Mandla where protection was extended to the Khannat Forests (area 68,629 acres).

95. Of the area under protection during the year 1,922,971 acres or 3,005 square miles were successfully protected as against 1,692,786 acres or 2,645 square miles during the preceding year. The percentage of failure thus fell from 3.45 to 2.46 and the cost from Rs. 11-7-5 to Rs. 10-15-2 per square mile. The decrease in the area burnt was conspicuously noticeable in the Saugor, Hoshangabad and Chhindwara Divisions though Seoni also contributed to it in a slight measure. There were, on the other hand, increases in the Mandla (North and South), Jubbulpore-Narsinghpur and Damoh Divisions. In the last the increase was considerable. The net result for the Circle as a whole was, however, satisfactory as the total area burnt was less than that in the preceding year by nearly 12,000 acres. In the Mandla Division, out of the area of 3,870 acres burnt (by 11 fires) 3,441 acres were in the Khanat Forest (just brought under protection). But for this the result would certainly have been a decrease for the Division as compared with the preceding year. In the Jubbulpore-Narsinghpur Division the increase is assigned to two big fires occurring in the Dhanwahi and Khairi Ranges, the culprits in which have been ordered to be prosecuted. The greater area burnt in the Damoh Division also appears to be due to the protective measures having been extended during the year to a very large area. The satisfactory results in Saugor, Hoshangabad and Chhindwara Divisions were to some degree due to the favourable conditions of the weather, but more particularly to greater vigilance on the part of the protective staff and in the last named Division, also to the enforcement of their duty on the Kotwars and Mukaddams in connection with the fire protection. It may be noted here that not a single fire occurred in the Bori, Sohagpur, Hoshangabad and Magardha Ranges of the Hoshangabad Division, Khairi and Jubbulpore Ranges of the Jubbulpore-Narsinghpur Division and Nerbudda Range of the Seoni Division, and the Range Officers concerned deserve their share of credit for the successful protection of their respective charges. The only two fires (burning in all 149 acres) in the Hoshangabad Division were due to causes unknown.

96. The expenditure incurred on special protection during the year amounted to Rs. 33,028 as against 30,047 in the preceding year. The figure is inclusive of Rs. 94 spent in the Mandla Division for clearing fire lines and maintaining watchers along the portion of the Lormi Range (Balaghat Division, Southern Circle) bordering the unprotected forests in the Mandla Division.

97. The largest number of fires occurred in the Saugor Division and the smallest in Hoshangabad.

98. The total number of fires during the year was 98 and the area burnt 48,515 acres or 76 square miles against 128 fires and 60,486 acres or 95 square miles burnt during the preceding year. The lowest percentage of failure was .03 in the Hoshangabad Division and the highest 9.88 in the Damoh Division.

99. Form No. 15 gives the classification of fires according to the several Divisions of the Circle. It will be seen that out of the total of 98 fires no less than 44 covering an area of 20,835 (out of the total of 48,515) acres were from causes unknown, and this large proportion is contributed specially by Saugor, Damoh and Chhindwara Divisions. In the last named Division the area burnt is, however, comparatively very small.

100. The area burnt from cause A (carelessness in burning fire line) is conspicuously large in the Damoh Division in which as much as 9,565 acres were burnt in two fires alone. In both cases the subordinates at fault have been adequately dealt with.

101. There were six fire cases prosecuted (2 in Mandla, and 4 in Chhindwara); in three of these convictions were obtained,—two resulted in acquittal and one was pending at the close of the year.

102. Of the fires in unprotected forests, Jubbulpore-Narsinghpur reports 28, Damoh 10 and Seoni 22, covering in all an area of 18 square miles.

103. Of the 98 fires in the specially protected areas, 31 were inspected by the Divisional Forest Officers, one by an Assistant Conservator and one by an Extra-Assistant Conservator. The percentage inspected was greater than that of the preceding year.

104. The season on the whole was not unfavourable to successful fire protection though the work of burning fire lines was in some measure impeded.

SOUTHERN CIRCLE.

105. The area in which fire protection was attempted in the Southern Circle during the year was 3,098,263 acres as compared with 2,968,095 attempted in 1911-12. This area forms 69 per cent of the total area of A Class forests, and of this 98.39 per cent was successfully protected as compared with 98.44 in the previous year. The greater part of the remainder were departmentally burnt early in the year, or so heavily grazed down that there was no material to burn. 31,084 acres out of 49,945 acres of the total area burnt were in the Raipur Division. The largest fires occurred in this Division, most of which starting in the South of the District spread to the forest from accidental fires in private jungles. In Raipur five fires burnt nearly 41 square miles of forest, one fire alone which spread from the Madras border being accountable for 19 square miles. It appears hopeless to protect the Sihawa Ranges from fire with the present methods in vogue, the old fire registers showing frequent fires in these forests every year or so and in future the early burning of the more inflammable savannahs will be resorted to. The fire protective measures in Bilaspur were more successful, and this is no doubt partly due to the early burning of some of the large open maidans of the East and West Lormi Ranges. In Balaghat two conflagrations burnt two and five square miles respectively, the largest fire being attributed to malice propense. The season was a good one for fire protection on the whole owing to a comparatively early rainy season and all other Divisions show less than 1 per cent of area burnt during the year. The writer toured through part of the Moharli Range in the North Chanda Division during May and was struck with the finality obtained, by successful fire protection, the greater part of the area owing to the dense cover of trees and bamboos containing so little inflammable grass that a fire would now do comparatively little damage even in the hot weather.

106. The total cost of fire protection in the Circle in the area in which protection was attempted amounted to Rs. 48,054 or Rs. 9-14-10 per mile. This compares with Rs. 45,771 or Rs. 10 per mile spent in 1911-12. The highest cost was in North Chanda where it amounted to Rs. 15-7-0 per square mile. In the two Chanda Divisions the intensity of fire protection is far too high under present conditions and it should be possible to greatly reduce the cost of these operations in future.

107. The statement in Form No. 15 shows the causes of fires. There were 7 cases taken into Court.

BERAR CIRCLE.

108. The area attempted to be protected was 2,327,231 acres or 3,636 square miles. The decrease of 136 square miles as compared with the area attempted in the previous area is due to the re-arrangement of felling series in the Dabka and Sawalmendha Ranges in Betul where a considerable area has been decided to be unworkable and therefore removed from protection, and to considerable areas in Nimar being given over to early burning instead of systematic protection.

109. The area burnt amounted to only 18,316 acres or 29 square miles, being 0.79 per cent only of the area attempted. The results are a great contrast to those of previous years. They are due principally to the conditions of the season which were favourable to success for, though some showers in January and February delayed the final burning of the lines to some extent, yet fairly heavy and general rain fell in the latter part of May thus shortening the season of danger and the heat and drought were neither so intense nor so prolonged as in recent seasons. The scanty growth of grass and the great demand for grazing

also diminished the risks of fire. To the policy of burning early some areas where systematic protection could not be carried out must also be attributed some of the success in areas where protection was concentrated. The results varied from 0.02 per cent of failures in Akola to 1.6 per cent in Nimar.

110. The total cost of fire protection fell from Rs. 38,853 to Rs. 33,691, owing to the abandonment of the areas referred to, while the cost per square mile attempted fell from Rs. 10.4.9 to Rs. 9.4.3 per square mile, this being due to the increased ease of line burning. On many lines it was reported that there was no grass to burn owing to the heavy grazing.

The cost of protection per square mile varied from Rs. 6.4.9 in Yeotmal to Rs. 18.0.10 in Amraoti. In this last Division the cost of protection is always high owing to the small area of the Reserves, but it should be possible to reduce it to some extent. In Buldana owing to the absence of inflammable material on the lines owing to heavy grazing the cost of protection fell from Rs. 14.13.4 to Rs. 7.11.6, while the percentage of failures was only 0.9 per cent.

111. Form No. 15 details the origin and causes of fires.

112. There were only 31 fires as compared with 61 in the previous year, and there was a decrease under every cause. The carelessness of workmen, purchasers and travellers caused 12 fires as against 11 in the previous year, but the proportion from this cause is very high. No fire could be attributed to deliberate incendiarism. Only one fire in Nimar was caused by sparks from a locomotive as compared with 4 in the previous year. Though the conditions were favourable to line burning yet it is satisfactory to notice that only 7 fires originated from carelessness or accidents in this respect as compared with 22 in 1911-1912. In Betul where 3 fires from this cause burnt 2,061 acres and Buldana where 2 fires burnt 503 acres, it was found that the staff had not taken sufficient precautions and the persons at fault were punished departmentally. In Melghat a fire from this cause was due to a sudden change in the direction of the wind.

(c) PROTECTION FROM CATTLE (FORMS 16 AND 17).

NORTHERN CIRCLE

113. Form No. 16 shows the details of areas closed and open to grazing during the year

114. The area entirely closed to grazing throughout the year was 971 square miles or 13.24 per cent of the total Forest area, while the area closed for part of the year was 50 square miles or .68 per cent of the total Forest area.

115. The area open to all animals (including browsers) was 4,905 square miles or 66.72 per cent of the total Forest area. Thus 86.11 per cent of the total area of the forests was open to the grazing of horned animals throughout the year and .68 per cent was similarly open for part of the year, while 66.72 per cent was open to browsers throughout the year.

116. The number of cattle impounded during the year was 4,311 as against 4,096 of the preceding year.

SOUTHERN CIRCLE.

117. There was an increase in the areas open to grazing of cattle during the year of 153 square miles or 3 per cent over the areas open in 1911-12. The area opened to sheep and goats was reduced by 96 square miles and the area open to sheep by 70 square miles during the year. There were practically no A Class forests open to browsing except in the forests of the Nagpur-Wardha Division which are now permanently closed to all goats and sheep. In the North Chanda Division it is possible that the extension of reservation of areas (grass birds) for fodder will still further lessen the areas open to browsing. The increase in the area opened to grazing occurred mainly in the Nagpur-Wardha Division and was due to the opening of the Pench Ranges to grazing to relieve the incidence of grazing in other blocks where it was too heavy. There was however a decrease in the

number of cattle actually grazed. Light grazing is held to be good for regeneration as it keeps down the heavy growth of grass which tends to choke freshly germinated seedlings which spring up during the rainy season and undoubtedly lessens if it does not altogether obviate the damage done by accidental fires in the hot weather. Grazing is usually confined to the rainy season while the crops under cultivation are on the ground. After the rainy season grass tends to lose its nutritive power and cattle in the black soil country are fed on dry stalks of millet (kurbi). Light grazing is consequently more beneficial than harmful except in freshly coppiced areas. The reduction in the areas opened to browsing during the year occurred mainly in the Sironcha Range, South Chanda, and the 44 square miles of A class forest shown in column 6 of the form last year in the Raipur Division was apparently entered by mistake. Of the area 1,505 square miles closed to grazing 965 square miles represents areas of coupes temporarily closed to grazing after felling.

118. The number of cattle impounded during the year was 3,384 against 4,691 of the preceding year.

BERAR CIRCLE.

119. The details of area opened and closed to grazing are given in Form No. 16. In Berar proper the area closed to all animals for the whole year was 380 square miles or 11·2 per cent; the area closed to browsers was 1,437 square miles or 42·5 per cent, and the area open to all animals for the whole year was 1,515 square miles or 44·8 per cent.

In Nimar and Betul the area closed to all animals throughout the year was 256 square miles or 8·9 per cent; closed to browsers 2,588 square miles or 90·02 per cent; closed to all animals for part of the year 23 square miles or 0·8 per cent; and open to all animals throughout the year 8 square miles or 0·3 per cent. The last figure includes the small remaining B-I. area in Betul.

It was only in Nimar that it was found necessary to open closed coupes for part of the year in order to save the cattle. In Berar the area closed to all grazing rose by 41 square miles owing to the closure of coupes in an increased number of felling series under schemes of working. In Nimar and Betul the area so closed decreased from 481 square miles in 1911-12 as it was judged advantageous to keep coupes closed for five years only after felling instead of for 10 years as formerly prescribed.

120. The numbers of cattle that grazed in the forests during the past two years are compared in the following table:—

Year.	Buffaloes.	Cows and bullocks.	Sheep and goats.	Other animals.
1	2	3	4	5
		<i>Berar Division.</i>		
1912-13	166,543	10,93,875	491,794	3,478
1911-12	164,348	10,94,140	416,858	3,544
		<i>Nimar and Betul.</i>		
1912-13	58,530	2,76,736	2,311	354
1911-12	58,475	272,799	1,632	482

The figures in the corresponding statement of last year were incorrect.

121. In Berar the numbers of cows and bullocks shew a slight fall, owing to the decrease of those grazed free or at privileged rates. This decrease is but nominal as formerly free grazing passes in C Class were issued for a number of

plough cattle which are stall-fed and never used the forests. This has been dropped. The number grazed at full rates shew an increase of 16,761, and the actual increase in numbers must be about this figure.

The most serious point in Berar is the great increase in the numbers of sheep. In Yeotmal it is said that many of these animals which usually graze in Izara villages were sent last year to C Class forests. These large flocks not only consume much grass which is necessary for agricultural cattle but defile the grazing so that cattle will hardly touch it. Provision is being made in the grazing rules to retain power to regulate the admission of sheep.

In Yeotmal and Akola considerable mortality is reported among the cattle who were greatly reduced by the prolonged drought and semi-starvation in 1912 and were incapable of digesting the green grass when it appeared at length towards the end of July.

In Buldana it is reported that the people are beginning to send their cattle in larger numbers to the cattle camps in the large forest blocks though they are not yet very popular.

In Nimar as great water and fodder scarcity throughout the District was anticipated, a number of cattle camps were organized in the larger forest blocks and water was provided by bunding up nals early in the season. Arrangements were made to accommodate about 1½ lakhs of cattle but in the end a comparatively small number came to the camps. The water-supply held out better than expected, while the people preferred to keep their cattle to graze on wheat-stubbles to sending them into the forests where they say that the dry grass in the hot weather is deleterious to the animals.

122. The total number of cattle impounded was 6,035 as compared with 4,743 in 1911-12. Owing to semi-starvation the animals were more inclined to stray from their herdsman.

(d) PROTECTION AGAINST INJURIES FROM NATURAL CAUSES.

NORTHERN CIRCLE.

123. *Frost*.—There was practically no frost during the year. Slight damage was nevertheless reported to have been caused to saplings in some of the low lying places bordering the rivers in Mandla, Seoni and Chhindwara and in pronounced frost holes in the Hoshangabad Division.

124. *Wind*.—Except in Seoni and Chhindwara where the severe storm was accompanied by hailstones in February, no damage by wind is reported. In the former Division considerable damage is reported to have been done to foliage of trees in the southern portion, and several trees were uprooted in the Ganginala Range. In the latter (Chhindwara Division), the hail-stones were very large (said to be of the size of cricket balls) and did considerable damage to the lac and mohwa crops, besides breaking the branches, bursting the bark, stripping every leaf from trees lying in its course. In parts of Mandla too the crop of mohwa and achar is said to have been damaged by hail in February. The constant cloudy weather, moreover, damaged the mohwa flower and seed crop and the harra crop a good deal.

125. *Insects*.—Considerable damage was done by the teak leaf defoliator in the higher parts of the Chhindwara Division, the three Northern Ranges of Seoni, South-Eastern and South-Western Ranges of Damoh and all the Ranges (except Murwara) of the Jubbulpore-Narsinghpur Division; entire defoliation occurred in the Mandla Range of the North Mandla Division; and some damage in the Hoshangabad Division is also reported.

Weevil beetles damaged to some extent the young bamboo shoots in Hoshangabad, but it continued to cause considerable damage in the Garhakota Reserve of the Saugor Division. The Saugor Divisional Forest Officer, however, says that its life history is now thoroughly understood and steps were taken to reduce the damage caused by it by collecting and destroying as many of the mature beetles as could be found in the months of July to September.

In the Mandla Division a certain number of Sal trees were killed by the borer (*Ilypso cerambix spinicornis*) but the damage was less than that in the preceding year. A few infected trees were felled and barked. Mr. Stebbing's notes on the life history of this insect points to the probability of another serious attack in 1913-14.

Ants did some damage to the lac crop in the Chhindwara Division.

126. *Loranthus*.—41,391 trees were relieved of this parasite in the Jubbulpore-Narsinghpur, Damoh and Seoni Divisions at a cost of Rs 413. Besides, 2,971 trees were freed without cost in Jubbulpore-Narsinghpur and Chhindwara Divisions.

127. *Drought*.—No damage is reported from any Division.

128. *Wild animals*.—Considerable damage is reported to have been done in Jubbulpore Division and portion of Amarwara Range in the Chhindwara Division to young coppice shoots of Aonla, Dhawra Ghont and Salai by wild animals, especially sambhar and chital. In the Garhakota Reserve of the Saugor Division monkeys and pigs continue to destroy the new bamboo shoots, and although a large number of pigs including the litters were destroyed by Forest guards, yet they do not appear to be much reduced in numbers. In the Damoh Division too a good deal of damage is reported to have been caused by monkeys to young saplings and coppice shoots in recently felled areas.

129. *Climber cutting work* was done in all the Divisions by the Forest Guards without cost, but in addition Rs. 508 were spent in Mandla, Jubbulpore-Narsinghpur, Hoshangabad, Seoni and Chhindwara Divisions.

SOUTHERN CIRCLE,

130. *Creepers*.—The principal pest in the Southern Circle is the Ironi creeper (*Zysiphus*) which is still rampant in the Chanda, Nagpur and Bhandara Districts. Mere cutting has no effect in eradicating it owing to its coppicing powers. Splitting the stem lengthwise into four sections after cutting in the rains or early in the cold weather appears to have an effect somewhat analogous to girdling, as split portions throw out shoots which dry up in the hot weather and so exhaust the energy of the plant. Cattle are said to eat the young coppice shoots of this creeper, so that light grazing would appear to be advantageous after the creeper has been cut over. The cutting of climbers was continued on the usual small scale during the year, the area being 31,348 acres at a cost of Rs. 1,861 against 13,911 acres and Rs. 2,456 in the preceding year.

131. *Climate*.—No very remarkable damage was noted under frost, hail-storm or drought. Frost occurs in Balaghat and an attempt is being made to cultivate Chir pine which grows well on the uplands and is very resistant as a nurse to Sal trees. Some damage was reported in Bhandara from wind and North Chanda from hail.

132. *Animals*.—The damage done by borers and defoliators during the year appears to have been less than usual. Deer are reported to have done considerable damage to coppice shoots in the North Chanda Division where they have been preserved in sanctuaries and this is partly due no doubt to the absence of grass in the high forest.

BERAR CIRCLE.

133. *Frost*.—The season was mild. Some slight damage occurred in the Melghat, but the results of the severe frost of 1911 are still apparent, especially in the Melghat and among the babul in Bhongaon Reserve.

134. *Wind*.—No damage is reported.

135 *Drought*.—The repeated seasons of short rainfall and prolonged hot weather have had very serious results on old trees, mostly *saj* and *teak* and *dhaura* and especially in Nimar. Seedling reproduction failed almost entirely and coppice shoots of teak except in a few very favourable localities were very short and weakly.

136. *Insects*.—*Hyblaea puer* again committed extensive ravages on the teak in Betul and in the north-eastern parts of the Melghat, being apparently favoured by the dry season. The damage done to babul by the *Cæloslina spinator* in Bhongalon has apparently been arrested by the thinning and pruning of the young plants begun as described last year. When inspected by the Conservator the percentage of plants affected was found to be decidedly less than in the untreated area while the plants appeared more vigorous and healthy. Instructions were also given to grub up the remaining plants which showed signs of being bored by the larvæ and to smash the stumps thoroughly in order to kill the grubs before they could develop. Thinning and pruning were extended over 192 acres, while infected plants were grubbed up over 219 acres of the thinned area.

137 *Rodents and other animals*.—Rats, squirrels, hares and pigs did a good deal of damage to young bamboo seedlings in nurseries and transplants in the forests.

138 *Fungus*.—The spread of *Fomes pappianus* on *babul* in Amant is reported as arrested by the cutting out of infected trees.

139. *Lantana*.—In the Melghat 1,800 acres were cleared of lantana by grubbing up in the rains at a cost of Rs. 498. A large part of this area was only lightly affected. The Divisional Forest Officer does not consider lantana as a serious menace as it occurs principally on steep escarpments where forest growth is scanty but a careful watch must be kept on its spreading into the gentler slopes suitable to teak growth.

140. *Climbers*.—The most harmful climber observed is the *Nagbel*, *Caulepis Buchananii*, which infests the open forests in the Melghat and smothers the young teak where it is most important to encourage all tree growth. As it sends out vigorous shoots when cut it will be necessary to deal more drastically with this pest than has been done in the past when it has been cut back only once in the felling rotation. It should be cut back at the time of marking the coupes and again during the cutting back operations, and if found necessary at further intervals during the rotation. During the year on this system 26,484 acres of the current and coming year's coupes were cleared besides 2,225 acres specially undertaken as badly infested. In Nimar 4,700 climbers apparently of the large *Bauhinia Vahlia* are reported to have been cut and in Betul 293,507 at a cost of Rs. 270.7-6. Such figures of numbers are very unreliable. It is better each year to fix on certain areas to be cleared of climbers and to see that this is done which fact can be easily ascertained on inspection.

SECTION 4.—SYLVICULTURE.

(a) NATURAL REPRODUCTION.

(i) *Seed Reproduction*.

NORTHERN CIRCLE.

141. Reproduction of seed was on the whole satisfactory. Sal seeded fairly in most parts of the Mandla Division, but in the Jubbulpore-Narsinghpur Division it was not so good. In Saugor, Damoh, Chhindwara, Hoshangabad and Southern Ranges of Seoni, teak and other species seeded fairly. Harra crop was above the average in Mandla but not good in Jubbulpore-Narsinghpur. Bamboos flowered sporadically in Mandla, Hoshangabad, Seoni, Jubbulpore-Narsinghpur and Saugor Divisions, but did not produce much in the way of seed.

Mohwa crop was below normal in Jubbulpore-Narsinghpur, Damoh and Seoni. In the Chhindwara Division the best reproduction of teak has been in areas burnt over and along the banks of the Pench River. In Seoni the seeds of Bija were largely destroyed by insect attacks and the seeding of Saj particularly was below normal.

SOUTHERN CIRCLE

142. Production of seed of the more important species was good throughout the Circle. Reproduction by seed appears to be as poor on areas absolutely closed to grazing as on open areas which are always very heavily grazed. It is probable that light grazing or closure for short periods would be beneficial. Whether five year periods of alternate opening and closing will serve the purpose remains to be seen, it is being tried in some Divisions.

BERAR CIRCLE.

143. Reproduction from seed was generally poor, owing possibly to the lowering of the vitality of most species by the drought of the previous year but more probably to the want of moisture in the soil from the short rainfall. In the Melghat alone is reproduction reported as normal and in Akola as fairly good in favourable localities. Generally, germination was poor and most of the seedlings that appeared perished before the rains. Formation of seed was generally poor with the exception of *babul* and in some places *khair* which as usual seeded profusely. Teak appeared to seed fairly free but the seed appeared small and probably the percentage of fertility was low. Anjan failed to form much seed.

(ii) *Reproduction by Coppice.*

NORTHERN CIRCLE

144. Coppice reproduction was good in almost all the Divisions and more particularly in Saugor and Hoshangabad. The results obtained by cutting back sal poles damaged by selection fellings in Banjar and Motinala Ranges of the Mandla Division was unsatisfactory. In the Damoh Division it is noticed that Ganja (*Odina Wodier*) and Salai (*Boswellia Thurifera*) trees of even 8" to 10" diameter have failed to coppice though neighbouring trees of far larger girth have done so; also that in the Seoni Division many of the shoots of older teak and Saj trees either failed to produce coppice shoots or produced a miserable crop. It is observed by the Divisional Forest Officer, Hoshangabad, that a good deal of injury is done to the shoots of felled trees by excessive trimming, the roots being often injured by barking.

SOUTHERN CIRCLE.

145. Coppice reproduction is good and the almost universal custom of felling in coppice coupes throughout the rains appears to give as good results as coppicing in the dry season. The habit has grown up partly from the annual sale of coupes in July at the commencement of the Forest year which is convenient for administrative purposes and partly from the fact that poles fetch a better price in the market when felled in the rains and allowed to season slowly in the open.

BERAR CIRCLE.

146. Good coppice reproduction is reported only in Betul and parts of Akola. Elsewhere it was poor, the shoots of the year being short and weakly and many of these dying off during the hot weather. In the Melghat it was found that the Korku purchasers were in the habit of felling their trees and leaving the stools undressed until they returned, sometimes two or three months later, to remove the timber. This has been stopped and it is hoped that the change in procedure will improve the coppice reproduction in the Melghat where it is generally poor.

(b) ARTIFICIAL REPRODUCTION (FORM NO. 18).

NORTHERN CIRCLE.

147. Referring to the remarks in the last report, the sowings of teak and tins, carried out in June 1912, in the Mandla Division, resulted in complete failure. The teak sown in the gaps in Coupe No. VI near Kanha Rest-house germinated freely and most of the seedlings were alive in May. The mound sowings of various frost hardy species carried out in the Banjar and Motinala Ranges were fairly successful.

148. According to the directions of the Chief Conservator of Forests as noted in the last report arrangements were made to start a nursery for planting out hurra at Kisli, Mandla Division.

149. "Macaranga" seed obtained from Assam was tried in the Mandla Division and germinated freely, but most of the seedlings were dead in December and few if any survived the hot weather.

150. The Kanha (Mandla Division) Eucalyptus seed sown in 1912 failed to germinate, but the seedlings sown in 1911 were about 6" high in June 1913. This has been identified by the Forest Botanist as the *E. terminalis*.

151. In the Jubbulpore Division two maunds of Satkatha seed were sown broadcast (cost Rs. 4) and germinated well but could not survive the hot weather except khair seedlings.

152. In the above Division 300 pits were sown with Mhowa seed and fenced, and in 290 of them seedlings were produced. 680 seedlings and saplings of previous years were also fenced (cost Rs. 11). All these were found to be doing very well.

153. Nineteen thousand six hundred and fifty-three offsets of bamboos in Jubbulpore-Narsinghpur (cost Rs. 114) and 50 in Seoni were planted resulting in failure. In the Garhakota Reserve, Saugor Division, 9,000 pits were sown with seed and offsets (each in equal number) at a cost of Rs. 437 and watered in the hot season (cost Rs. 162) but a large proportion of offsets only appeared alive, the seedlings not having survived.

The seedlings planted in mounds in 1910-11 and 1911-12 (in Saugor Division) were a failure.

154. In the Saugor Division, 1,200 patches were sown (in the Mohli block) with Anjan seed (two years old and not very good) during the year and germination was satisfactory in 338 patches. Also of the seedlings sown in 1911 those that germinated are in excellent condition, some of the three years old being three feet high in December. As to the sowings of the above species in the Saugor Range, of the same Division, last year, a number of them re-appeared with the monsoon contrary to what was mentioned in the last year's report.

A bamboo nursery was started at Mundra (Saugor Range) for planting out bamboo seedlings in Jullunder Felling Series.

155. In the Hoshangabad Division 80 sandal seedlings, reared in the Sohagpur garden, were planted out in Binaika Felling Series, but only 12 survived having been planted in the shade, others being under too light a cover.

156. In the Seoni Division 1,714 teak seedlings from the forests were planted out to fill gaps at Korai and Rukher and 1,223 were found to be doing well.

SOUTHERN CIRCLE.

157. The artificial propagation of trees in this Circle is only carried out on a very small scale in various divisions. This consists of the sowing of seed of various species but is of such a petty character that it can hardly be said to be beyond the experimental stage.

BERAR CIRCLE.

158. *Regular Plantations.*—The bamboo plantation at Yeota in Akola gave a revenue of Rs. 601 or Rs. 24 per acre. This was obtained from the sale of 3,532 bamboos exploited departmentally. This only gives an average of about 2 annas 8 pies per bamboo which appears low as the price of *Kattang* bamboos in Berar.

159. *Taungya system.*—In the Amraoti, Buldana and Akola Divisions a total area of 671 acres was felled clear and given out for cultivation with forest seeds combined with field crops. Of this area, 531 acres were in babul bans and 140 acres in mixed scrub forests. In the area already under this system the results in stocking the land are generally good. The modifications in the rules whereby the period for cultivation of cotton is extended appear to make the system more popular while the attacks of the beetle appear to be diminished. In one area in Buldana germination of babul seed failed owing apparently to defective seed; in Akola one lessee failed to sow seed according to orders and his lease was cancelled while another was fined for the same fault. The results of this system of regeneration are on the whole very promising.

160. *Cultural operations.*—The extension of bamboo nurseries and plantations was not so great as in the previous year owing mainly to the failure of the seed which was obtained from Mysore to germinate. As usual rats, squirrels and porcupines did considerable damage in nurseries and pigs to the transplants in the forests. In Yeotmal the experiment was tried of getting local *malis* to rear the young bamboos in their gardens, but it is understood that it has not been completely successful. *Babul* and *um* seed were sown in various areas where the *laungva* system was not taken up by the people. Teak was sown over 300 acres in Buldana and *anjan* over 4 acres without much success. Generally such direct sowings in the forest are not of much use as the results are very poor and the trouble and expense of weeding and upkeep are considerable. The sowings of sandal in Akola are very promising, some 3,000 plants being reported as in a flourishing condition at the beginning of the rains in various localities. In Buldana the success was not so great.

(c) OPERATIONS FOR THE IMPROVEMENT OF GROWING STOCK.

NORTHERN CIRCLE.

161. The work of cutting back operations was carried on over an area of 27,775 acres at a cost of Rs. 7,774 as against 21,899 acres and Rs. 5,364 as cost during the preceding year.

In the Hoshangabad Division the above operations were carried out on more extensive and thorough lines than in the past.

In the Damoh Division the cutting back of 6,194 lac bearing Ghont trees was continued at a cost of Rs. 83.

SOUTHERN CIRCLE.

162. Cutting back operations were carried out in all Divisions either by purchasers under the terms of their agreements or departmentally. The following statement compares the work done departmentally during the year with that of the previous year :—

				Area.	Cost.	Revenue.
				Acres.	Rs.	Rs.
Balaghat	...	...	...	314	326	429
Bhandara	...	...	...	1,165	80	...
North Chanda	...	...	...	979	359	962
South Chanda	...	...	...	4,045	1,256	..
Total				6,503	2,021	1,391
Total for 1911-12				5,160	2,749	3,041

The work shown as improvement felling in South Chanda last year has this year been included in cutting back operations with which it was combined; cutting back during the year under report being confined to creepers has been included under creeper cutting.

BERAR CIRCLE.

163. Thinnings were carried out in *babul bans* in Amraoti, Buldana and Akola. The inferior material remaining in coupes worked in previous years was cut back in all divisions. The results are shown in the following statement:—

Division.	Area in acres.	Cost.	Cost per acre.	Revenue from material obtained.
	Acres.	Rs.	Rs. a p.	Rs.
<i>Thinning.</i>				
Amraoti	259	345	1 5 3	1 278
Buldana	314	103	0 5 3	169 Value of material unsold Rs. 48.
Akola	71	311	4 6 1	1,023
Total	644	759	1 2 10	2,470
Figures for 1911-12	937	950	1 0 3	1,687
<i>Cutting back.</i>				
Melghat	17,305	4,370	0 4 0	923
Amraoti	1,029	289	0 4 6	475
Buldana	2,122	1,244	0 9 5	591 Value of material unsold Rs 727.
Yeotmal	2,188	3,177	1 7 3	1,066
Akola	1,974	2,090	1 1 0	1,416 In addition a balance of last year's stock was sold for Rs 335.
Nimar	9,200	1 870	0 3 3	1,218
Betul	7,149	1,219	0 2 8	180
Total	41 063	14,259	0 5 7	5,869
Figures for 1911-12	3,298	10,447	0 4 6	13,358

Pesides the above 1,364 malformed and frost-bitten teak and *tinsa* were cut back in Betul at a cost of Rs. 134.

164. Cutting back operations were made more intense in Buldana, Yeotmal and Akola and a greater proportion of worthless material was removed than was formerly the case. Enquiries made by the Conservator in Akola showed that in the more accessible forests cutting back operations properly performed are decidedly remunerative, but that the original lessees are not satisfied with a mere 50 per cent profit on their outlay on these works and therefore leave much material uncut which fetches a ready sale. There is possibly some small risk of the material not being sold which appears to deter them. The Divisional Forest Officer was instructed to try to induce lessees to do more of this work in favourably situated coupes, but in the remoter forests we shall have to rely on departmental working for these operations for some years to come.

165. Besides the above operations in Bhongaon Reserve the young growing stock of *babul* was pruned and thinned over 411 acres at a cost of Rs. 640 and the stems of infected trees were smashed in order to destroy the larvae of the *celosterna spinator* beetle and restrain its ravages.

(d) EXPERIMENTS.

NORTHERN CIRCLE,

166. In the Jubbulpore Division experiments to test the effect of the season on felling in coppice reproduction were conducted in the Jubbulpore Range under the directions of the Imperial Botanist and the results of measurements of coppice shoots were communicated to him.

167. Further experiments made in the old Narsinghpur Division to test the effect of Salai for producing good coppice or pollard shoots resulted in failure as usual. In the Jubbulpore Forests in several instances salai below 3 feet in girth was found to produce fine coppice shoots and they were also found to live in a healthy condition during the last 10 years.

168. Experiments to test the effect of fires, occurring in each month from November to May, on tree growth and development of Forest crop are still being continued in the Damoh, Saugor and (old) Narsinghpur Divisions. The Divisional Forest Officer, Saugor, reports that arrangements were made for further ring countings of teak in Garhakota Working Circle and other localities. Some teak sections have been obtained and the ring countings will be carried out. For Narsinghpur and Damoh, no definite results are reported. In Damoh the measures relating to this experiment were only carried out during the year.

169. In the Jubbulpore-Narsinghpur Division lac was experimentally planted on 1,895 Palas (or Butea) trees (cost Rs. 9) with a view to produce seed lac for the Dhanwahi Forests and the result has been fairly good. Also 1,990 Ghont trees exhausted by the constant bearing of lac were cut back in the Murwara Range (cost Rs. 35) resulting in fine vigorous coppice shoots.

170. In the Hoshangabad Division one-fourth acre was planted and one-fourth sown with "Tur" in the Sohagpur garden. The young "Tur" plants were infected with lac at the beginning of the cold weather. The larvae swarmed but were all killed off in May probably owing to excessive heat. It is believed that this experiment has been tried and proved a failure at Pusa and its repetition here seems scarcely worth while. 200 young "Kakra" (*Butea Frondosa*) seedlings were planted in the Sohagpur garden and will be infected with lac in the next cold season. The cost of these experiments was Rs. 23. At Churna in the Bori Range $4\frac{1}{2}$ acres of land was ploughed up, cost Rs. 27 and 3 years' old "Kakra" seedlings were planted over one-fourth acre and 80 per cent have survived and thrown up good vigorous shoots. Kakra seed was sown in the rest of the area in June last. It is proposed to infect these with lac next cold weather. The cost amounted to Rs. 316.

In Damoh a small experiment was carried out to test the powers of certain species to reproduce from cuttings and with this object 8 cuttings of teak, 2 each of Seja, Saj and Cheola and 3 each of Ganja and Salai were planted in the Sagoni Rest-house compound. All failed except in the case of one, Ganja. This cutting was 2 to 3 inches in diameter. The Divisional Forest Officer remarks that the fact that even one "cutting" of Ganja in three was established itself is interesting as Ganja will not coppice freely. The matter is of interest rather than importance as Ganja is a species of very little use.

Instructions were issued to all Divisional Forest Officers in the Circle by the close of the preceding year that the rules in regard to future sample plots should be carefully observed and they were directed that the existing sample plots be brought into line with the rules, new registers being opened and the information already collected utilized as far as possible.

SOUTHERN CIRCLE.

171. Plots have been started in several Divisions for the purpose of ascertaining the rate of growth of trees of various species, the rate of coppice growth, the effect of thinnings on coppice shoots, the effect of measures to eradicate Ironi creepers, the yield of grass for fodder on different soils and under varied conditions, and the incidence of cattle grazing and the effect of the same on forest growth. These were dealt with in some detail in last year's report and it will take some years yet to come to any definite conclusions.

172. Chir Pine is doing well in Balaghat on the Raigarh plateau and sandal wood is tending to reproduce itself naturally from the seed from the plantations in North Chanda which are carried probably by birds and germinate on the shady banks of neighbouring streams.

BERAR CIRCLE

173. The sample plots formed in Buldana and Akola to ascertain the correct intensity for thinnings in *babul bans* and those to investigate the varieties of *babul* were maintained as also were those in Buldana and Nimar to ascertain the correct height for pollarding *anjana* and to ascertain the best conditions for seed regeneration of the same species.

174. Experiments were started in Melghat to ascertain the possibility of introducing Sainar (fodder) and Motia (rusa) grass into areas where these species are not found.

In Nimar and Melghat experiments in tapping *Salai* for resin were continued. Those in Nimar are the more promising and they will be continued in both Divisions.

Two hundredweight of fibre of *Helicteres Isora* were sent to Dundee from Melghat for trial as a substitute for hemp.

175. *Processing of timber.*—The specimens of powellized and untreated timber under observation at Khandwa since 1910 gave further results as follows :—

Processed	{	Palas	}	Slightly attacked by weevils.
		Gurar		
		Remy	}	Attacked by fungus
		Pipal			Slightly eaten by whiteants.
Unprocessed	{	Gurar	}	Attacked by weevils
		Kasai			Slightly " "
		Bar	}	Badly attacked by fungus and whiteants.
		Pipal		

In Betul 300 sleepers of Saj were treated under the direct supervision of the Forest Economist by a double treatment of Zinc chloride and heavy oil. The sleepers are to be made over to the Great Indian Peninsula Railway for trial in the railway track.

Experiments are in progress in various localities to ascertain the best methods of treatment of the more valuable fodder grasses under different conditions.

SECTION 5.—EXPLOITATION.

(a) SYSTEM OF MANAGEMENT.

(i) Major Forest Produce.

NORTHERN CIRCLE.

176. *Selection fellings.*—In the Mandla Division in accordance with the provisions of the Working Plan, 1,971 and 848 Sal trees were selected for felling during the following year, respectively, in Coupe V of the Motinala Range and IX of the Banjar Range against 1,848 and 1,169 trees, respectively, of the last year. The area covered was 1,846 and 545 acres, respectively. 329 Sal trees were felled by lessees in Coupe VII and 552 in Coupe VIII of the Banjar Reserve against 395 trees of the preceding year; 937 trees in Coupe III and 855 in Coupe IV of Motinala, and 110 trees in the Khanat Forests were felled by lessees during the year against 1,945 in Motinala and 120 in Khanat Forests during the preceding year. 250 Bija trees were felled in the Mandla Range over an area of 200 acres.

177. *Improvement fellings.*—24,264 acres were worked over under this system as compared with 28,383 of last year. 5,091 acres could not be worked over due specially to the dearth of labour more or less keenly felt in almost all the Divisions, also some of the coupes remaining unsold for want of demand. In the Garhakota Reserve of the Saugor Division fellings were much heavier than in the past, particular attention being paid to the removal of inferior species interfering with the growth of teak. The fellings in the Bori Forests of the Hoshangabad Division were again postponed until the completion of road and offer of a satisfactory price for the lease of coupes.

178. *Coppice with standard fellings*.—14,053 acres were worked over under this system as against 9,726 acres of the preceding year. In the old Narsinghpur Division only 7 out of 11 coupes (opened during the year) could be sold, and even out of these 7, one was not touched at all by the lessee owing to the poor quality of the crop.

179. *Unregulated fellings*.—The work was carried out in all the Divisions, except Chhindwara, and restricted generally to the nistar areas as well as those in which the prescriptions of the regular Working Plans were held in abeyance. This was moreover permitted in the Mandla Division to the extent of removal of teak and Saj timber standing on excised areas and on Ryotwari Waste.

The orders of Government on the question of restricting unregulated fellings by commuters in the Mandla Division (referred to in the last Report) were awaited at the close of the year.

SOUTHERN CIRCLE

180. *Selection fellings*.—These were undertaken in the South Chanda Division only, 3,814 trees being felled by the lessee of the Allapilli Block in compartment 13, area 480 acres. Some of the saleable teak left over from last year's operations were also exploited during the year.

181. *Improvement fellings*.—These were undertaken in all Divisions except Nagpur-Wardha over an area of 18,367 acres as compared with 13,350 acres in the previous year and 10,627 acres in 1910-11. The principal increase occurred in the Balaghat (+2,238 acres) and Bilaspur (+2,410 acres) Divisions. In Balaghat this was due to the opening of certain areas in the Paraswara and Dhansua Ranges for the removal of dead and dying teak trees in addition to the ordinary improvement fellings in the Sal areas of the Raigarh plateau. In Bilaspur the increase is due to the introduction of new Working Plan prescriptions. In North Chanda the old Working Plans prescribed improvement fellings but in practice these are really coppice with standard fellings and come under that category.

182. *Coppice with standard fellings*.—This is the system most generally in use in all Divisions except South Chanda. There was little increase in the total area worked over, being 40,290 acres compared with 40,096 acres worked in the preceding year. There are considerable arrears in certain Divisions from Working Plan prescriptions. There were deficits amounting to 1,095 acres in the Bhandara Division brought forward during the three years the plan has been in force. These are made up as follows:—

From 1910-11 316 acres, from 1911-12 730 acres and from the year under report 949 acres. In the Nagpur-Wardha Division 2,273 acres out of 9,001 remained unworked; this is the first year in which coupes were exploited according to the prescriptions of the recently revised Working Plan, the heaviest deficits being in the Umar and East and West Pench Ranges.

BERAR CIRCLE.

183. These were made over 578 acres in the babul bans of Amraoti, Buldana, and Akola Divisions as compared with 460 acres in the previous year.

184. 28,385 acres were worked under this system as compared with 27,114 acres in the previous year.

185. 23,080 acres were worked under this system as compared with 13,189 acres in 1911-1912. Last year there were large deficits owing to various causes and the return to a more normal figure is due mainly to the removal of labour difficulties.

186. These were made in the C Class areas in Berar and in the Nistar areas of the A Class in Nimar and Betul.

(ii) *Minor Produce*

NORTHERN CIRCLE

187. The principal items of minor produce obtained from the forests are —

Hatti.—The total value of hatti removed from the forests during the year amounted to Rs. 22,579 as against Rs. 14,065 during the preceding year. The greater part of the work was done departmentally in the Mandla Division owing to inadequacy of offers from lessees.

Lac.—The value derived from this produce was Rs. 1,353 compared with Rs. 10,622 obtained in the previous year.

Measures were taken to prune coppice or infect the lac bearing trees specially in the following Divisions. —

Jubbulpore-Narsinghpur	...	1,895 Palas and 1,090 Ghont trees
Hoshangabad	..	11,576 various trees
Seoni	...	850 Palas and other trees.
Chhindwara	...	2,404 Palas and 503 Kusam trees

The Divisional Forest Officer, Hoshangabad, reports that the year was again disappointing as regards lac. The propagation in June and July was a failure as the majority of the larvæ was washed away by rain. The infection in November was successful but the greater part of it could not survive the hot weather. In Chhindwara the crop of last year is reported to have been damaged by monkeys and ants with the result that it was poor during the year under report. In the Damoh Division the crop is reported to have suffered from the prolonged hot season of 1912.

Mohwa and Achar.—This produce was almost entirely removed by purchasers and fetched Rs. 4,452 against Rs. 5,771. Free grants were only nominal and to the value of Rs. 19 against Rs. 1,492 during the preceding year. In the Damoh, Saugor and Jubbulpore Divisions the crop was poor owing to its destruction either by hail stones or unseasonal rains.

Hides and Horns.—The revenue obtained from this produce was Rs. 7,600 against Rs. 9,315 of the previous year. This is a difficult item to estimate with accuracy but from the market prices at present quoted, it seems that a larger return should be obtained.

Bamboos.—The total value derived from this produce was Rs. 57,346 against Rs. 53,912 of last year, *viz.*, by removals by purchasers Rs. 47,240, by leases Rs. 4,640 and by commuters Rs. 5,465. In addition, removals by free grantees amounted to Rs. 509 against Rs. 849 during the last year. In the Hoshangabad Division all the coupes of Magardha, Hoshangabad and Rahatgon Ranges and one coupe of Sohagpur were leased out on the Monopoly plus Royalty system, but the results were disappointing as instead of opening an export trade the lessees acted as middlemen and sold the produce to local purchasers. The areas in the Dhain block are as yet unworked. It is proposed to work a portion of this block by lease.

Grass.—The revenue obtained during the year as compared with that in the preceding year is shown below :—

			During the year.	During the preceding year.
			Rs.	Rs.
By leases	...	...	14,696	12,670
By commuters	...	...	4,736	4,702
By purchasers	...	...	4,642	2,018
Departmental agency	...	...	56,657	1,00,690
Free grantees	...	...	693	881
Total			81,424	1,20,961

The decrease during the year is all due to the supply of grass during the preceding year to the Bombay Presidency. Again, the figures for the year include nearly Rs. 54,000 realized in the Hoshangabad Division during the year for grass supplied to Bombay last year.

Grazing—The following abstract of Form No. 17 shows the number of cattle grazed at full rates, privileged rates and free of charge during the year and the preceding two years:—

Year	At full rate.			At privileged rate.			Free.			Value at full rate	Total value at full rate
	Full rate	Other animals	Value received.	Full rate	Other animals	Value received	Full rate	Other animals	Value received		
	No.	No.	Rs.	No.	No.	Rs.	No.	No.	Rs.	Rs.	Rs.
1920-21	50,263	64,350	1,91,768	44,300	13,115	25,11	6,127	1,01,426	9,016	2,31	70,117
1921-22	51,160	77,593	2,01,607	41,073	19,945	31,006	73,311	2,12,250	11,083	1,150	1,37,907
1922-23	81,619	77,801	1,07,111	1,111	590,126	23	57,89	2,12,970	1,279	1,111	6,62,811

The following are the details, by classes, of the animals on which full rates were paid:—

Rate.	Buffaloes	Cows and bulls	Goats and sheep.	Other animals.	Total
Ordinary	51,424	1,67,669	27,869	667	2,47,628
Nomadic	2,296	20,038	55	1,424	23,813
Commercial	1,20,102	2,20,269	45,073	2,777	3,88,121

The incidences of grazing on the total area in the several Divisions are:—Mandla 4.07 acres per head; Jubbulpore-Narsinghpur 3.40; Damoh 2.43; Saugor 2.50; Hoshangabad 6.78; Seoni 2.70 and Chhindwara 2.17. The total incidence for the Circle comes to 3.00 as against 3.16 during the last year.

The question of reducing the grazing in the Garhakota Reserve was enquired into and it was agreed to reduce the number from 500 to 270 from the current year.

In accordance with the suggestion of the Chief Conservator of Forests in his Inspection Note for 1911 selected areas in some of the Felling Series permanently closed to grazing under the Working Plan were opened to limited grazing for short periods with the result that it appears to have been beneficial to the Forest and has assisted natural regeneration.

SOUTHERN CIRCLE.

188 These are sold on licenses in all Divisions. The supply is most abundant in the Balaghat, Bhandara and Chanda Divisions and the shortage in wagons on the Railway already noticed has had the usual prejudicial effect during the year under report. The plan of permitting bamboo traders to cut and collect bamboos in the open coupe and then to remove them on license has helped to increase sales and will be continued. There is considerable competition with the Zamindari forests, the owners, of which tend to undersell Government, this was particularly noticeable near the Pertabgarh Range (Bhandara).

Bamboos are usually sold by the hundred, in some Divisions the cartload rate is in force, and in others single bamboos are sold at rates varying from one to three pice each.

189. The new grazing rules were introduced during the year. Cattle in the province are mainly grazed on privileged rates which is dealt with subsequently. As already explained grazing is universal except in certain areas in high forest and in coupes closed to permit of coppice reproduction.

190. The traffic in this produce was dealt with departmentally, leased out or sold on license. The blocks of forest more or less permanently reserved for fodder and called grass birs are usually leased out for the year and the coupes temporarily closed to grazing are open for the supply of fodder grass to individuals on licenses under the stamp system. Generally speaking, the former system is most profitable to Government.

191. This is difficult to distinguish from fodder grass and much of the grass sold from grass birs is retained for thatch. The distinction is purely artificial as the same grass is often used for both purposes and its suitability depends on the season of cutting, almost any grass cut early in the year is suitable for fodder and very few grasses cut after seeding contain much in the way of nutriment. As regards sales on license, grass cut early is removed at a low royalty to encourage stall feeding, but the date after which grass is classed as thatch grass varies in different Divisions from the 15th October to the 1st January.

192. The *Hurra* crop is perhaps the most important minor produce leased in the Balaghat and Raipur Districts where the *Terminalia Chibula* is most abundant. The crop in Balaghat was sold in 1911-12 for Rs. 27,000 and in the year under report was leased for three years at an annual rental of Rs. 6,667. The variation in annual yield of this product is considerable as will be shown by the following returns showing exports from Railway Station :—

1909-10	1910-11.	1911-12.	1912-13.
tons	tons.	tons	tons
5,858	1,010	570	2,787 (7 months.)

In the Raipur Division the *Hurra* crop for the year was sold for Rs. 3,221.

193. Lac was exploited departmentally in the Raipur Division and royalty was also realized on lac propagated on trees in Reserved Forests. The year under report was not a good one.

194. The right to collect other miscellaneous minor produce is almost invariably leased out, licenses being only issued when the supply is small and unimportant.

BERAR CIRCLE.

195. Bamboos are removed on a 3-year rotation except in the Melghat and the Tapti Range where the rotation is 2 years. The revenue realized was Rs. 66,042 for removals by purchasers, Rs. 1,015 from departmental extraction, while bamboos to the value of Rs. 4,569 were taken by free grantees and right holders. There was a drop of Rs. 5,601 in the value of bamboos removed in the Melghat, due to the adoption of the figures for commutation fixed by the 1912 Conservators' Conference.

Rusa grass.—Extraction of the grass and the lease of the right to extract *rusa* oil yielded Rs. 33,491 as compared with Rs. 33,345 in 1911-12.

Harra—yielded Rs. 1,951, the crop being very poor.

Mohwa and achar—brought in Rs. 1,204.

Hides and horns—revenue amounted to Rs. 4,211.

Lac—which has nearly disappeared from the forests, yielded Rs. 614.

Mineral products—produced Rs. 10,041.

Grass—was sold on licenses and passes, by lease and on commutation. It was also worked departmentally in all Divisions, excepting Amraoti.

The quantity of grass removed was 166,256 tons on which a revenue of Rs. 1,61,547 was obtained, besides which the value of grass removed on free passes was estimated at Rs. 5,247, as compared with 168,486 tons, Rs. 1,92,964 and Rs. 4,070 for 1911-12.

196. The following table shows the number of animals grazed at different rates and free of charge :—

Year.	At full rates.			At privileged rates.					Free.			Total fees.	
	Buffaloes, cows and bullocks.	Other animals.	Value received.	Buffaloes.	Cows and bullocks.	Other animals.	Fees.		Buffaloes, cows and bullocks.	Other animals.	Value at full rates.	Actuals.	Value at full rates.
							Actuals.	Value at full rates.					
	No.	No.	Rs.	No.	No.	No.	Rs.	Rs.	No.	No.	Rs.	Rs.	Rs.
1911-12	1,246,552	497,800	4,69,096	...	137,153	...	8,603	51,557	211,979	137	42,327	4,77,699	5,69,980
1911-12	1,235,083	431,876	4,89,501	39	127,281	...	8,022	46,192	226,409	640	44,841	4,37,523	5,20,534

The totals are not quite correct, owing to an error by which fees were collected in the Melghat from ryotwari villages as was customary before the Settlement. When the mistake was discovered these fees were returned as far as possible, but the exact number of cattle which actually entered the reserves could not be ascertained.

In Berar proper the number of cattle grazed at full rates altered as follows :—Buffaloes increased from 164,216 to 166,422. Cows and bullocks from 870,197 to 886,958. Sheep and goats from 416,387 to 491,754. Other animals from 3,465 to 3,476. The total fees increased from Rs. 3,21,672 to Rs. 3,47,367.

The number of cows and bullocks grazed free under concessions made by Government fell from 225,837 to 206,352. This reduction is really a paper one, as in former years it was the practice to issue free passes to many persons who did not avail themselves of them. This has now been stopped.

Under the grazing rules as applied in Nimar the number of cattle grazed at ordinary rates altered as follows :—buffaloes rose from 21,899 to 22,318, cows and bullocks from 28,611 to 33,822; at nomadic rates the numbers fell, buffaloes from 2,621 to 1,570 and cows and bullocks from 4,069 to 3,802, while numbers at commercial rates fell, buffaloes from 16,258 to 15,092 and cows and bullocks from 35,620 to 34,262. The number grazed at privileged rates rose from 76,781 to 85,906.

In Betul the number of buffaloes at ordinary rates fell from 11,774 to 3,904, while those at nomadic rates increased from 5,768 to 15,580. The number of cows and bullocks similarly altered, those at ordinary rates falling from 46,244 to 22,398 and at commercial rates rising from 18,082 to 40,424.

The total numbers are in each case much the same as last year, the variations under the heads of ordinary and commercial being due to better classification.

Grazing at privileged rates was granted to 51,047 cows and bullocks as against 48,754 in 1911-12.

197. The grazing incidence in A Class forest in Buldana stood at 1'9 acres per head, in Amraoti at 1'2, in the Melghat at 7'2, in Yeotmal at 2'7, in Akola at 1'6, in Nimar at 6'4, and in Betul at 4'5 per head.

In C Class areas in Berar it stood at '5 acres in Amraoti, 6 in Buldana and Akola, and '7 in Yeotmal. The incidence is calculated on the basis of 1 buffalo being equal to 2 cows or bullocks.

(b) AGENCY OF EXPLOITATION (FORMS NO. 19 & 20).

(i) Department Agency.

NORTHERN CIRCLE.

198. Major Produce.—The outturn of timber and fuel cut and collected by departmental agency during the year was 359,381 and 538,921 cubic feet, respectively, as against 172,861 cubic feet of timber and 349,160 cubic feet of fuel in the

preceding year, and was obtained chiefly from the improvement fellings and curting back operations carried out for the improvement of forest growth, and from timber, etc., cut in the widening of fire lines and for the construction of roads. A small quantity was also extracted for the construction of departmental buildings.

As explained in the last report exploitation was undertaken departmentally in the Damoh Division with the object of inducing contractors to take up work later on. The outturn of timber and fuel thus collected during the year was 225,000 and 443,535 cubic feet, respectively, as compared with the corresponding figures of 54,800 and 264,830 cubic feet of the preceding year. The increase during the year is due to the operations having been undertaken on a considerably extended scale. The increase is also in a measure ascribed to the factors newly adopted to reduce timber, etc., to cubical contents.

The revenue derived from departmental major produce during the year was 21,252 or 2.19 per cent of the total revenue of the forests for the Circle.

199. *Minor Produce.*—Bamboos 190 tons; Hurra 751; Lac 2; Hides and Horns 3; Mineral Products 73; other minor produce 80, and grass 1,075 tons were extracted departmentally to the value of Rs. 22,363 exclusive of Rs. 34,000 realized on account of grass supplied to the Bombay Presidency during the preceding year. If this latter item be included the percentage with reference to the total revenue is 7.85 per cent.

200. On the subject of baling of grass for sale to agriculturists for encouraging stall-feeding, it may be stated as follows:—

Although the operations were not successful in the past it was under Government orders that they were again undertaken during the year, in consultation and with the assistance of the Agricultural Department.

In the (old) Jubbulpore Division, at Kakartala, grass was baled to supply the Agricultural Experimental Farm at Adhariat. 70 bales weighing one maund each and 260 weighing half a maund each were made which, excepting 4 bales destroyed by cattle, were all delivered at the Farm. The object was to test the quality of the grass. The result is not yet known. The cost of the operations was Rs. 97 and the revenue realized Rs. 102.

Similar operations were undertaken in the Khairi Range of the (old) Narsinghpur Division with a view to train the subordinates in the baling of grass and to supply baled grass to agriculturists for encouraging stall-feeding of cattle. When 24 bales were ready all the grass collected was spoilt by rain which continued for some days and the operations had consequently to be given up and the grass disposed of for what it fetched. The revenue realized was Rs. 75. No agriculturist came forward to purchase baled grass and it was therefore sold to the officer in charge of the Colliery at Mohpani. The cost on the operations was Rs. 39.

In the Damoh Division 195 bales (average weight $2\frac{1}{2}$ maunds) each of selected grass were prepared. To encourage sales 10 bales were sent to Bansa village, 41 to Hindcra and 8 to Patera. These villages lie in the Hatta-Damoh Haveli. Of these 59 bales, only 9 could be sold, though offered at cost price, *viz.*, Re. 0-8-3. The quality of the grass was good as it had been specially selected at the suggestion of the Deputy Director of Agriculture at Jubbulpore. The Divisional Forest Officer is of opinion that the only way to induce agriculturists to purchase baled grass is to cut the grass just before it flowers and as soon after as possible. The cultivators may at their convenience bale it themselves. They might also, to start with, bring their own baling wires, obtained on deferred payments from the Revenue and Agricultural Department. These wires can be used with care several times. The total quantity of grass cut was 96 tons, of which 71 tons were baled. $4\frac{1}{2}$ tons baled and 8 tons of loose grass was sold to agriculturists and $62\frac{1}{2}$ tons baled and 5 tons loose to other purchasers. Of the balance of 16 tons (4 tons baled and 12 tons loose) 5 tons were sold at the close of the year and 5 tons used for thatching huts for road coolies. The remaining 6 tons will possibly have to be written off. The total cost of the operations in the Division was Rs. 595 and the revenue realized Rs. 635.

In the Saugor Division all the grass areas near Saugor and the Railway are taken up every year by the local contractors or by the Military Grass Farm authorities. Banda Range was, therefore, the area chosen for such operations in order to test the attitude of the agriculturists. A depôt was formed at Baraithi, 33 miles from Saugor. The grass which was of good quality (not more than 25 per cent being "spear" grass) was cut in November-December. 403 bales (of an average weight of $1\frac{1}{2}$ maunds each) weighing in all 22 tons were prepared in January-February and offered at first for Re. 0-12-0 per bale. The sale of grass was widely advertised with the assistance of the Deputy Commissioner and the Revenue staff. By the end of June only 153 bales were sold for Rs 75 at Re. 0-9-0 and Re. 0-6-0 each. 250 bales still remain unsold, and as it would not pay to bring them into Saugor for sale they will have to be written off. Of the 22 tons cut and baled, 3 tons were sold to agriculturists and 5 to other purchasers.

In the Hoshangabad Division 581 bales (weighing from 2 to $2\frac{1}{2}$ maunds each) were prepared at a cost of Rs 519. Of these, 189 were sold for Rs. 271 and the rest remained unsold, although every effort was made to sell it to agriculturists. The quality of grass is undoubtedly poor, the majority of it being "sukli," and in addition slightly discoloured and damaged by rain in November.

The following statement shows in brief the above operations carried out in the above four Divisions :—

Divisions.	Quantity of grass cut (in tons)		Quantity of grass disposed of to				Grass remaining unsold or		Total Revenue.	Total expenditure.	Remarks
	Baled	Loose.	Agriculturists		Others		Baled	Loose			
			Paid	Loose	Paid	Loose					
Jubbulpore-Narsinghpur.	7 14	.	7	...	14	...	...	...	Rs. a. p. 101 13 0	97 10 0	Sold to Superintendent, Imperial Farm, at Aharli.
Damoh	71	25	42	8	52	...	...	...	635 0 0	(a) 59. 0 0	45 Tons sold after close of the year. 5 Tons to be written off.
Saugor	22	...	3	...	5	...	14	...	71 13 0	145 3 0	(a) Includes 14 tons cost of wire (for bales) purchased in previous years.
Hoshangabad	46	...	15	.	...	...	31	...	271 8 0	518 12 0	

GRASS OPERATIONS FOR SUPPLY TO THE BOMBAY PRESIDENCY.

201. As noted in the last report 7,950 tons of fodder grass was to be supplied from this Circle to the famine-stricken districts in the Bombay Presidency. This was arranged to be supplied as follows :—

				Tons.
Hoshangabad	...	...	...	6,500
Jubbulpore	...	...	...	400
Damoh	...	...	...	550
Saugor	...	...	...	500

As explained in the last Report, owing to the difficulty in the supply of waggons the operations ended with the following result :—

Division.			Quantity in tons.	Expenditure.	Revenue.
				Rs.	Rs.
Hoshangabad	...	...	3,185	95,815	1,08,450
Jubbulpore-Narsinghpur	...	...	398	10,476	14,388
Damoh	...	...	418	10,939	14,097
Saugor	...	...	484	16,342	17,236
Total			4,485	1,33,572	1,54,171

Of the above the following figures relate to the previous year (1911-12):—

Division.				Quantity in tons.	Expenditure.	Revenue.
					Rs.	Rs.
Hoshangabad	...	...	..	2,368	54,435	54,454
Jubbulpore-Narsinghpur	...	...	..	398	9,206	9,064
Damoh	...	...	..	367	9,283	12,660
Saugor	...	...	..	460	15,993	14,860
Total				3,593	88,922	91,038

and the following figures to the year under report :—

Division.				Quantity in tons	Expenditure	Revenue.
					Rs.	Rs.
Hoshangabad	...	...	...	817	41,380	53,996
Jubbulpore-Narsinghpur	...	...	...	...	1,270	5,324
Damoh	...	...	...	51	1,651	1,437
Saugor	...	...	...	24	349	2,376
Total				892	44,650	63,123

The total amount of grass despatched differs from that shewn in the last year's report as the present figures include an item of 21 tons which was despatched from Damoh but was not delivered, and having decayed was destroyed by the Railway authorities. Moreover, incorrect figures were received from one of the Divisions. The grass was despatched to the following districts of the Bombay Presidency:

Division.	1911-12.			1912-13.		
	To Ahmedabad District.	To Ahmednagar District.	To Kaira District.	To Ahmedabad District.	To Ahmednagar District.	To Kaira District.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Hoshangabad	1,944	297	127	752	...	65
Jubbulpore-Narsinghpur	398	...	...	...	...	...
Damoh	367	...	...	51	...	...
Saugor	381	...	79	9	...	15
Total	3,090	297	206	812	...	80

The figures of expenditure and revenue also differ from those shown last year, and this is mainly due to the actual adjustments not having been made by the time the last report was written.

The figures shown in the present report may be taken as finally correct.

SOUTHERN CIRCLE.

202. *Major Forest Produce.*—Departmental operations for purposes of exploitation were undertaken in North and South Chanda, Nagpur-Wardha and Bilaspur. In other Divisions the work was mainly confined to the disposal of trees felled along roads and fire lines or such material as was required for departmental buildings, &c. In North Chanda departmental working was considerably reduced owing to purchasers coming forward to buy standing trees in coupes. In South Chanda teak and other valuable trees were felled and sawn up, a beginning was made in the training of local coolies as sawyers which has been successful. These men will always be very useful for working up crooked and defective logs which are not worth the cost of haulage to a distant Saw Mill.

In Bilaspur the more remote forests were worked departmentally in order to stimulate the export of poles and to determine what profit could be made by purchasers. It was found that fuel could hardly be worked at a profit and extraction was mainly confined to poles. The yield per acre of fuel being barely 50 cubic feet. There was an increase in departmental working in Nagpur in order to carry out as far as possible the provisions of the recently introduced working plan. This was mainly in the East Pench Range which was not sold on lease owing to want of suitable offers from probable purchasers.

MINOR FOREST PRODUCE.

203. In compliance with the orders of the Local Administration efforts to extend the use of fodder grass by agriculturists were continued during the year, but from the agricultural point of view were not a success. The operation of baling entails carting hay to the baling press from which it is sold, whereas the agriculturist who wants hay can very well cut and cart the hay himself direct from the meadow to his house, thus saving the expenses of a double journey. It is also found by experiment that owing to the size of the cart, comparatively few bales can be carried and no advantage is gained in carting a larger quantity, leaving out of consideration the actual cost of baling. The experiment was a success from a financial point of view as baled hay is readily bought for export to towns on the line of railway.

204. The following statement gives the result of operations called for by the Chief Conservator :—

Division.	Grass cut and baled.		Grass sold			Used departmentally.	Undisposed of at end of year.	Remarks
	Amount.	Cost.	To agriculturists.	To others.	Total value received.			
	Tons.	Rs.	Tons.	Tons.	Rs.	Tons.	Tons	
Bhandara	33	...	...	27	433	6	...	Cost not known.
North Chanda	60	894	...	58	1,292	...	2	
Nagpur-Wardha	114	1,900	2	76	3,310	...	36	
		2,794			5,035			

This gives a surplus of Rs. 2,241. In Nagpur-Wardha 51 tons of unpressed grass were cut at a cost of about Rs. 234 and sold for Rs. 503 in addition to the baling operations noted above ; of the 36 tons undisposed of at the end of the year under report 10 tons were sold at reduced rates for Rs. 130 after the close of the year, leaving 26 tons to be written off stock. The whole stock might have sold at reduced rates but for an error on the part of the Civil authorities in holding up the higher rates till too late. A great deal of the time of the staff was taken up in looking after these operations to the detriment of their proper work, but should the work be continued regularly in future, a special temporary staff should be employed for the purpose.

In Bhandara fodder baling and thatch grass cutting operations were done at the same time, the total cost of which amounted to Rs. 298.

There was no work undertaken in regard to the supply of grass to the Bombay Presidency, sums of Rs. 437 and Rs. 66 being adjusted during the year on account of expenditure and revenue from the previous years' operations.

The outstanding of Rs. 1,582 unadjusted in last year's Annual Report on account of the failure of a contractor to complete his contract has been written off during the current year.

205. *Lac*.—In Bilaspur some $4\frac{1}{2}$ tons of lac were collected departmentally with the help of forest villagers and sold, yielding a net profit of Rs. 1,248.

In Bhandara about two tons of lac were collected and sold at a profit of Rs. 617, and in Raipur a very small amount was collected and sold departmentally.

206. The total value of disposals of all kinds of forest produce amounted to Rs. 71,667.

BERAR CIRCLE.

207. 187,158 cubic feet of timber and 2,56,699 cubic feet of fuel were removed by departmental agency in cultural operations and widening lines as against 196,589 cubic feet of timber and 253,742 cubic feet of fuel in 1911-12. 28,811 bamboos as against 16,416 in the previous year.

In all Divisions small collections of grass for the use of touring officers were made departmentally. In addition to these some experiments in baling grass for disposal to agriculturists were made in Yeotmal, Akola, Nimar and Betul. The figures obtained are shewn in the following summary :—

Division.	Quantity of grass.		Cost of operations.	Quantity disposed of		Revenue realized		To be written off.
	Cut.	Baled		To agriculturists.	To others.	From agriculturists.	From others.	
	Tons.	Tons.	Rs.	Tons.	Tons.	Rs.	Rs.	Tons.
Yeotmal	255	34	2,390	...	239	...	3,499	16
Akola	67	67	786	45	22	781	433	...
Nimar	171	169	2,228	129	40	1,579	1,410	2
Betul	240	73	472	.	175	...	458	65
Total	733	343	5,876	174	476	2,360	5,800	83

In no district did there appear any great keenness on the part of agriculturists to obtain baled grass for stall-feeding. In Akola the Divisional Officer reports that he had to persuade various substantial men to take up as much as they did. In Yeotmal the heavy demand in the town precluded all sales to agriculturists. In Nimar the agriculturists demand though slightly larger could not be termed urgent as only 128 tons were sold to this class. In Betul there was no such demand owing mainly to the existence of large malguzari forests and the absence of the principle of stall-feeding. If the operations had depended on an agricultural demand they would have resulted in heavy loss. The sales to others just met the expenses of working and the sales to agriculturists gave the profits on the operations. Though the percentage of profit is high the total transaction is but small and it is doubtful whether there would be any profit at all except in seasons of fodder scarcity. Baling operations entail a good deal of dislocation of work.

(ii) Purchasers.

NORTHERN CIRCLE.

208. *Major Produce*.—The outturn of timber and fuel removed by purchasers from the forests of the Circle during the year amounted to 2,341,553 and 4,642,931 cubic feet, respectively, as compared with 1,577,897 cubic feet of

timber and 3,889,600 cubic feet of fuel in the preceding year. The revenue derived from this source was Rs. 1,81,921 as against Rs. 1,60,254 of the previous year or 18·69 per cent of the gross revenue of the year. The increase in revenue is due to better demand.

209. *Minor Produce*.—The total value of the minor produce removed by purchasers including bamboos, grass, grazing and other minor produce was Rs. 6,19,852 against Rs. 4,36,752 of the preceding year.

SOUTHERN CIRCLE.

210. The usual system of auction sales of coupes was continued during the year and is gradually ousting the method of sales by licenses, though it will probably never succeed in altogether superseding it. The well tried stamp system continued to be used for sales by licenses. Paid vendors are being gradually replaced by commission vendors who are paid varying rates of commission on the sales they effect. Paid vendors are only employed where sales are few and far between. A proposal to issue tickets for the lower values of stamps was mooted and is still under the consideration of the Chief Conservator. It is held that a great deal of the vendor's time is spent in issuing licenses for comparatively small sums and licensees are consequently kept waiting.

Leases are usually granted for annual coupes, generally at the beginning of the forest year when auctions are held. There are two long leases in force—one with the Bengal Timber Trading Company in Balaghat and the other with Messrs. Bhickraj Sagarmull Bugla in the South Chanda District, both noted in last year's report. The latter have now in course of erection a large Steam Saw Mill on the outskirts of the town of Chanda and the criticism made in last year's Annual Report certainly appears justifiable; on the other hand, it must be remembered that there is a fairly big cart traffic in the direction of Allapilli from Chanda, so that carting in the reverse direction is cheaper. It is probable that a light bullock tramway alongside the present cart road would be a paying proposition if the permission of the Public Works Department to its construction were obtained. Such a tramway would to a great extent obviate the repairs caused by the cutting up of the road by carts.

The total value of the year's sales amounted to Rs. 3,39,191.

211. With the exception of bamboos which are sold by the hundred, minor produce of any importance is leased out for one or more years. Myrabolams being a variable crop, the annual lease is a somewhat speculative investment on the part of the purchaser; the Divisional Officer, Balaghat, advocates a five years' lease so that profits and losses in good and bad years will counterbalance. Some trouble is caused by the lessees of trees in Malguzari areas whose employees outbid the Government lessee in purchasing from villagers; during the year under report an important case was brought into Court by the Government lessee bearing on this point against an influential malguzar which is still pending. The total value of the year's sales amounted to Rs. 5,03,663.

BERAR CIRCLE.

212. Purchasers removed 822,568 cubic feet of timber and 3,382,984 cubic feet of fuel as against 837,256 cubic feet and 2,617,283 cubic feet in 1911-12.

The revenue from minor produce removed by purchasers, including the value of grazing, amounted to Rs. 7,76,518 as against Rs. 7,25,741 in the previous year. The increase is attributable to the strong demand for fodder grass and grazing.

(iii) *Rights and Privileges.*

NORTHERN CIRCLE.

213. The following statement represents the estimated quantity and value of the produce granted free or at privileged rates during the year :—

		Timber.		Fuel.		Bamboos.		Grass and grazing.	Other minor produce.	Total.
		Cft.	Value.	Cft.	Value.	Tons.	Value.	Value.	Value.	Value.
			Rs.		Rs.		Rs.	Rs.	Rs.	Rs.
Right-holders	...	...	..	...	...	...	..	...	...	...
Free grantees	...	24,163	1,242	276,493	3,525	91	509	5,125	899	11,300
Grants at privileged or reduced rates.	...	...	...	346,112	5,408	1,700	5,466	62,500	24,197	97,571

Thus the total value of grants at privileged rates amounted to Rs. 97,571 and the loss sustained was approximately Rs. 1,96,800 including Rs. 1,93,100 on account of grazing.

Fuel was granted only in the Seoni Division and other minor produce more or less in all the Divisions.

SOUTHERN CIRCLE

214. The following statement is according to Government of India Circular No. 9—113-7, dated the 26th June 1911 :—

		Timber.		Fuel.		Bamboos (including karkas).		Grass and grazing.	Other minor produce.	Total
		Cft.	Value	Cft.	Value.	Number.	Value.	Value	Value.	Value.
								Rs.	Rs.	Rs.
Right-holders	..	...	...	...	...	...	...	...	...	...
Free grantees	...	72,128	3,156	544,927	3,802	705,189	5,643	2,518	2,530	17,649
Grants at reduced rates.	...	1,470	35	3,101,000	14,430	1,597,994	8,257	1,48,748	575	1,72,045
Total	...	73,598	3,191	3,645,927	18,232	2,303,183	13,900	1,51,266	3,105	1,89,694

Commutation by which villagers pay lump sums down for the value of forest produce removed during the year was in force in Balaghat, South Chanda and Raipur. This method of recovering revenue is only suitable in B Class forests or where the forests are so extensive as to be out of proportion to the cultivated area. These factors apply in the case of the South Chanda and Balaghat Divisions respectively. Measures are being taken to restrict commutation in Raipur. Commutation is limited as regards major produce to the removal of dry wood and when this does not exist in sufficient quantities to meet the demand of the villagers they are apt to manufacture fuel by the simple process of cutting green trees and letting them dry where they fall. This evasion is difficult to detect and is detrimental to the forest.

The principal privilege is that of grazing at nominal rates which is given to agriculturists on the basis of 4 cattle to each working plough without reference to area. It is not difficult to see how advantage can be taken of this by cattle owners who keep far more cattle than they require for cultivation, and proposals have been made which will prevent the number of working ploughs being exaggerated.

Cattle are rated under three classes (a) Privileged, (b) Ordinary and (c) Commercial. The rates for (a) and (b) are specially laid down for agriculturists and are based on the number of working ploughs in the possession of the

individual ryot. No proportion is laid down between a working plough and the area of land tilled, and the commercial rates exceed the other two, being usually twice the ordinary and eight times the privileged rates. Considerable power is placed in the hands of the patwari who has to write up the passes of cattle owners and agriculturists. The new rules made it inevitable that there should be a general rise all round in the number of cattle grazed at privileged and ordinary rates and it is probable that unless steps are taken to proportion the number of working ploughs to the area tilled the number of cattle so grazed will go on increasing. As a plough can be bought for four rupees, there is a great inducement for an agriculturist to lay in a good number and call them all working ploughs.

BERAR CIRCLE.

215. The following statement shows the estimated quantity and value of produce granted free or at privileged rates during 1912-13:—

	Timber.		Fuel.		Bamboo.		Grass and grazing.	Other minor produce.	Total.
	Cft	Value, Rs.	Cft.	Value Rs.	No	Value Rs.	Value, Rs.	Value, Rs.	Value Rs.
Right-holders ..	74 364	1,262	1,374,019	28,911	263,400	3,980	17,208	4,167	55,528
Free grantees ...	32 678	7,282	320,327	4,476	80,840	589	29,610	1,473	43 430
Grants at reduced rates.	873	162	172 370	1,284	283,010	2 317	88,117	642	92,552
Total ...	1,01,915	8,706	1,866,716	34 671	612,250	6,886	1,34,965	6,282	1,91,510
Figures of 1911-12	51,091	5 708	1 810,679	36 721	945,341	12,007	1,32,452	9,894	1,06,782

Under the head of right holders are included those to whom concessions are granted under Government orders in the C Class areas in Berar. True right-holders are very few, being only the villagers of Panala, who may graze 250 head in the Marwari Reserve of Yeotmal and the Gosains of Tapowan Khurd in Akola who may graze 125 head.

(iv) Free Grants.

NORTHERN CIRCLE.

216. Free grants were allowed to forest villagers for home consumption, to other villagers whose houses were destroyed by fire in Mandla and Damoh, and to the District Council, Damoh, for fencing road-side plants. Some free grants were also allowed to the Friends' Mission in Hoshangabad for erection of huts in settling a village for famine orphans. The details are given in the statement in the preceding section and amounted to Rs. 11,300.

The aggregate value of produce granted free and at concessional rates was Rs. 2,08,100.

SOUTHERN CIRCLE.

217. The only non-recurring large grants made during the year were on account of villages burnt down. The usual free grants were made to forest villagers, touring officials and employees of forest lessees and the total value is estimated as follows:—

	Rs.		Rs.
Timber ...	3,156	Grass and grazing ...	2,518
Fuel ...	3,802	Other minor produce ...	2,530
Bamboos ...	5,643	...	...

BERAR CIRCLE.

218. The value of free grants made amounted to Rs. 43,430, details being shown in the statement in the previous section. They are made to forest villages

and to inhabitants of revenue villages whose houses have been destroyed by fire. A few retired forest officials are allowed free grazing for their cattle.

(c) OUTTURN AND SOURCES OF FOREST PRODUCE.

NORTHERN CIRCLE.

219. All the forest produce was extracted from the reserved forests. The total outturn of major produce was 2,725,097 cubic feet timber and 5,458,345 cubic feet fuel against 1,779,374 and 4,492,362 cubic feet, respectively, of the previous year. The total value of the minor produce removed was Rs. 702,753 against Rs. 5,49,576 of the preceding year. This includes Rs. 57 5, for bamboos, Rs. 4,69,707 for grazing, Rs. 81,424 for grass and Rs. 93,767 for other minor produce, including harra, lac, mohwa and achar, hides and horns, &c, &c.,

The number of cattle grazed in the reserved forests was 1,273,593 against 1,487,140 in the preceding year.

The total expenditure incurred on the management of State forests was Rs. 2,00,463 as against Rs. 1,83,320.

SOUTHERN CIRCLE.

220. The following statement compares the total removals of all kinds of produce from the A Class forest during the year with those of the preceding year:—

			1912-13.	1911-12.
Timber, cubic feet	{ Government Agency	...	323,537	336,797
	{ Purchasers	...	4,813,099	3,153,598
Fuel, cubic feet	...	...	14,450,162	14,550,781
Bamboos, numbers	...	...	16,251,386	14,593,003
Grazing, animals	...	..	731,887	743,154
Fodder and thatch grass, tons.	{ Government Agency	...	1,094	3,095
	{ Purchasers	..	152,639	81,902
Other minor produce, tons	...	...	23,925	28,671
Mineral products, cubic feet	...	..	1,088,409 cft.	408 Tons 226,660 Cft.

In addition to this it is estimated that the yield from B Class areas yielded 309,584 cubic feet of timber, 1,889,019 cubic feet of fuel. Bamboos 223,235, 10,851 tons of fodder and thatch grass. 4,884 tons of other minor produce and 9,079 cubic feet of mineral products and yielded grazing to 137,657 head of all animals. These estimates are not very reliable however. Of the more valuable products teak 14,420 cubic feet to the value of Rs. 13,912 was extracted from the Allapah forest and sal sleepers measuring 63,418 cubic feet were extracted from the Raigarh forests.

Bamboos.—There was an increase in the quantity of bamboo extracted of 1,658,383 particularly in the Balaghat Division, though it is small compared to what might be removed if the traffic on the railway was not restricted by the shortage of wagons. The Divisional Forest Officer reports that merchants from Berar who purchase bamboos from the local exporters had to return in despair owing to the want of wagons.

Grazing.—The slight decrease in the number of animals grazed is due to working plan restrictions and to the lowering of grazing incidence.

The following shows the number of cattle grazed at various rates:—

	Commercial rates		Ordinary rates.		Privileged rates.		Free.		Total.	
	1912-13.	1911-12.	1912-13.	1911-12.	1912-13.	1911-12.	1912-13.	1911-12.	1912-13.	1911-12.
Horned cattle	113,572	33,854	211,642	325,848	432,543	422,486	8,133	7,482	765,990	789,670
Sheep, goats and other animal	58,572	53,363	44,157	60,801	493	846	332	201	103,554	115,211

There was a falling off in the total number of animals grazed though there was some increase in those grazed at privileged rates. The figures do not however call for any special explanation.

Fodder and Thatch Grass.—The cessation of the Bombay grass famine operations caused a decrease in the amount of fodder extracted departmentally. The increase in the total amount of grass removed has not been clearly explained. It is fairly general though probably more apparent than real. The estimates of outturn are based on receipts and grass birs having fetched better prices it is presumed an equivalent larger amount of grass was removed. It is practically impossible to differentiate between fodder and thatch grass which depends to what use the consumer puts the material removed.

There was an increase in the amount of minerals removed due to the inclusion of road metal removed by the Public Works Department being included in the form during the year for the first time in some Divisions. No explanations have however been given by Divisional Officers.

There was a decrease in the removal of other minor products principally under myrabolams, the year under report not being a good one.

BERAR CIRCLE.

221. The following statement shows the outturn of major produce and the value of the outturn of minor produce extracted by all agencies from the different classes of Government forests :—

Class of forests.	Major produce.		Minor produce.				
	Timber, cubic feet, solid.	Fuel cubic feet solid.	Bamboos.	Fodder.	Grazing.	Rusa oil.	Mis- cellane- ous.
			Rs.	Rs.	Rs.	Rs.	Rs.
Class A	552,524	2,395,025	37,775	61,519	1,20,746	13,845	15,408
„ B	3,022	31,159	1,441	47,285	5,985	337	1,385
„ C	62,863	1,309,990	1,167	3,824	2,60,395	73	21,952
Total	618,409	3,736,174	40,383	1,12,628	3,87,126	14,255	38,745
NIMAR AND BETUL DIVISIONS.							
Class A	498,359	1,597,855	31,243	54,166	1,31,668	19,236	17,463
„ B-I	...	...	...	...	274	..	...
Total	498,359	1,597,855	31,243	54,166	1,32,142	19,236	17,463
Total 1912-13	1,116,768	5,334,029	71,626	1,66,794	5,19,268	33,491	56,208
Total 1911-12	1,084,938	4,566,189	81,098	1,97,034	4,80,981	33,664	52,372
Increase or decrease	+ 31,830	+ 767,840	—9,472	—30,240	+ 38,287	—173	+ 3,836

CHAPTER III.

FINANCIAL RESULTS (FORM No. 24).

NORTHERN CIRCLE.

222. Form No. 24 prepared by the Comptroller shows the details of revenue and expenditure of the year. In the following statement figures of the year are compared with those of the preceding year and average of the five years previous to it :—

Year.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.
Average of five years from 1906-07 to 1910-11.	5,63,073	4,60,322	+ 1,02,751
1911-12	7,89,414	5,96,676	+ 1,92,738
1912-13	9,72,853	6,20,813	+ 3,52,040
Difference between 1912-13 and 1911-12 ...	+ 1,83,439	+ 24,137	+ 1,59,302

The above will show that there was an increase in the receipts, expenditure and surplus of the year as compared with the corresponding figures of the previous year. The surplus of revenue over expenditure is shared by all the Divisions of the Circle.

The increase of Rs. 1,83,439 in the receipts for the year over that of the preceding year was chiefly due to the introduction of the new grazing rules, and in some measure to better prices obtained from sales of coupes to lessees, and to outstandings from last year realized during the year.

223 Of the gross revenue Rs. 2,03,177 were realized from the sale of major produce, *viz.* timber and fuel removed by departmental agency and by consumers and purchasers. It shows an increase of Rs. 22,277 over the corresponding figure for the preceding year. The revenue from timber represents 15 per cent of the gross revenue and that from fuel 6. Of this 21 per cent 2 per cent represents the major produce removed departmentally and 19 per cent that removed by consumers and purchasers.

The total revenue from the sale of minor produce which includes bamboos, grass, grazing and other minor produce was Rs. 7,25,783 or 75 per cent of the gross revenue and shows an increase of Rs. 1,52,617 over the corresponding figure for the previous year.

Miscellaneous revenue amounted to Rs. 43,897 or 4 per cent of the gross revenue and shows an increase of Rs. 8,545 over the previous year's figure.

224. The total expenditure of the year amounts to Rs. 6,20,813 or Rs. 24,137 more than that incurred in the preceding year. The expenditure of the year represents 64 per cent of the gross revenue, while the proportion of net to gross revenue is 36 per cent.

Forty one per cent of the total expenditure was incurred on A—Conservancy and works and 59 per cent on B—Establishment, the total expenditure under these heads being Rs. 2,55,164 and Rs. 3,65,649 respectively.

Of the total increase of expenditure Rs. 2,292 was under A—Conservancy and works and Rs. 21,845 under B—Establishment. In the former the increase was principally due to departmental collection of Harra in Mandla and departmental operations of timber and fuel in Damoh. Also more commission having been required to be paid to license vendors for the increased revenue from grazing; greater expenditure on roads, fire protection and other works; Rs. 20,000 odd having been paid as the purchase money, etc., of the Indpura and Singora Malguzari in the Hoshangabad Division. Moreover the expenditure during the year includes nearly Rs. 45,000 on account of grass supplied to the Bombay Presidency mostly during the preceding year and but for this and for the purchase of the malguzari villages referred to above the expenditure of the year would certainly have been much less instead of more than that of the preceding year.

Under B—Establishment the increase is due principally to the addition of some Imperial and Provincial Officers to the strength of the Circle; to the increased rate of pay for Forest Guards and travelling allowance to Rangers and Range Assistants and to the increase in establishment and contingencies consequent on the splitting up of two ranges in the old Mandla Division into four.

225. The total amount of revenue outstanding fell from Rs. 55,884 to Rs. 54,322.

226. The outstandings due to the Department from contractors and disbursers amounted to Rs. 24,970 against Rs. 19,597 of the previous year. The difference is ascribed to the non recovery of taccavi advances from forest villagers in some Divisions due to failure of crops and other reasons, to the payment of remuneration to patwaris and revenue inspectors in the Mandla Division not having been adjusted and to the advances on hurra collection in the same Division not having been adjusted by the close of the year.

227. The estimated value of stock at the close of the year was Rs. 1,35,526 against Rs. 1,78,835 of the preceding year.

SOUTHERN CIRCLE.

228. The following statement compares the revenue and expenditure of the year with those of the previous year and with the average of the preceding five years.

Year.	Receipts.	Charges.	Surplus.
1912-13	9,53,413	6,33,501	3,19,912
1911-12	7,60,145	6,62,763	96,382
Average 1906-07 to 1910-11	6,89,509	6,02,291	87,218

There was an increase in revenue of Rs. 1,93,268, a decrease in expenditure of Rs. 30,262 and an increase in surplus of Rs. 2,13,530 as compared with the figures of the previous year but, if the receipts and charges on account of Bombay grass operations in 1911-12 are omitted both revenue and expenditure as well as surplus show an increase of Rs. 2,41,598, Rs. 8,571 and 2,32,827 respectively over the previous year.

229. The increase in revenue of the year over that of the preceding year is common to all Divisions except North Chanda which shows a slight decrease due to the inclusion in 1911-12 of a sum of Rs. 29,949 on account of grass operations and also to (1) better prices obtained from sale of coupes (2) a higher revenue derived from grazing on account of the introduction of new grazing rules and (3) larger sales of bamboos in Bhandara and Bilaspur. In South Chanda Rs. 55,450 was paid by the Alapalli lessee as a first instalment and in Balaghat Rs. 19,821 by the Bengal Timber Trading Company against a sum of Rs. 8,800 only in the previous year. The revenue from minor produce extracted by departmental agency shows a very large decrease owing to the discontinuation of grass operations but that by purchasers shows an increase of some Rs. 6,000 on account of better prices obtained for grass and other produce principally in Nagpur-Wardha. This was counterbalanced by a decrease of Rs. 10,733 in Balaghat on account of hurra. Of the total revenue 40 per cent was from major produce, 56 per cent from minor produce and 4 per cent from other sources.

Bilaspur shows a surplus for the first time since 1896-97, but the increase in revenue occurred under all heads which was mainly due to extension of roads and to the working of the forests up to their full normal yield.

230. The charges under A and B show a decrease of Rs. 30,262. The expenditure under A amounted to Rs. 2,57,876 or 41 per cent of the total and less than that of the previous year by Rs. 29,297 due chiefly to the inclusion in 1911-12 of the sum of Rs. 38,833 on account of grass operations. Of this 14 per cent was spent on roads, buildings and tanks against 11 per cent in 1911-12.

Expenditure under B amounted to Rs. 3,75,625 or 59 per cent of the total and was less than that of the previous year by Rs. 965.

231 The total amount of revenue outstanding was Rs. 17,605 against Rs. 8,128 in the previous year.

232 The outstandings due to the Department from contractors and disbursers amounted to Rs. 45,213 and the amount due by the Department Rs. 3,369 against Rs. 55,606 and Rs. 3,048 respectively in the previous year.

233 The estimated value of timber and other produce in depôts fell from Rs. 52,085 to Rs. 14,896 and of live and dead stock from Rs. 3,25,107 to Rs. 3,21,78.

234. The money yield per acre of Government forests during the year has been :—

Balaghat Re. 0-3-11, Bhandara Re. 0-5-4, Bilaspur Re. 0-2-7, North Chanda Re. 0-3-7, South Chanda Re. 0-4-5, Nagpur-Wardha Re. 0-6-1 and Raipur Re. 0-2-1, respectively.

235 The decreased outturn noted in the last chapter due to want of export facilities has again adversely affected the revenue from Balaghat, North Chanda and Bhandara Divisions, respectively.

BERAR CIRCLE

236 The following statement compares the revenue and expenditure of the year with those of 1911-1912 and the average of the preceding five years :—

Forest Year.	Revenue.	Expenditure.	Surplus
1912-1913	11,95,622	6,28,417	5,67,205
1911-1912	11,66,629	5,94,114	5,72,515
Average of years 1906-1907 to 1910-1911	9,30,461	4,96,591	4,33,870

There was thus an increase over the previous year in revenue of Rs. 78,993, in expenditure of Rs. 34,103 and in surplus of Rs. 44,890.

The percentage of surplus to gross revenue rose very slightly, *i. e.*, from 46.7 to 47.4.

The operations for the supply of grass to the Bombay Presidency undertaken during the preceding year were extended over a portion of the year under report, and if the revenue (Rs. 48,636) and expenditure (Rs. 41,060) on account of these transactions be omitted from both sides, the total revenue from normal sources was Rs. 11,46,986, the expenditure Rs. 5,87,357 and the surplus Rs. 5,59,629; the percentage of surplus to gross revenue being 48.8.

236 (a). The increase in revenue was obtained from all Divisions except Melghat where the restrictions introduced on the exploitation by purchasers in the new reserves caused a considerable falling off under most heads of revenue. The general increase, excluding the Bombay grass supply, was mainly due to that under the head of fodder grass and grazing consequent on the general scarcity of fodder due to short rainfall which caused a demand on the forests even in excess of the demand in the previous year. There was a decrease under timber removed owing to the drop in Melghat owing to the restrictions in the new reserves, while under fuel there was a substantial rise principally in Amraoti, Akola and Yeotmal. Under bamboos there was a considerable drop owing mainly to the difficulty experienced by bamboo exporters in Betul in getting wagons on the railway, while under miscellaneous minor produce the increase is due principally to Nimar and Betul where the competition for Rusa grass leases was strong.

237. The expenditure under Conservancy and works was Rs. 2,77,075 or 44 per cent of the total, an increase of Rs. 18,652 over that of the previous year. The principal increase was due to the operations for the supply of grass to Bombay Presidency (Rs. 5,599), remuneration for the collection of the increased revenue (Rs. 4,312), communications, buildings and tanks and wells (Rs. 12,826).

238. Expenditure under Establishment was Rs. 3,51,342 or 56 per cent of the total an increase of Rs. 15,451 over that of the previous year. The increase is partly due to the promotions and increments obtained in both the superior and subordinate services and partly to the extension of travelling allowance in the subordinate staff.

239. The outstandings on account of revenue at the end of the year amounted to Rs. 18,537, an increase of Rs. 1,099, as compared with 1911-1912, due to outstandings on leases for minor produce in Malghat.

240. The outstandings due by contractors and disbursers stood at Rs. 41,102, a decrease of Rs. 20,575 over the last year's figure which is due to the adjustment of advances made to the contractors who supplied grass to Bombay.

241. The estimated value of live and dead stock at the close of the year was Rs. 2,45,09, showing an increase of Rs. 10,282 in favour of the year under report owing to the value of new buildings and furniture purchased.

242. The following statement shows the percentages on the total revenue of the revenue obtained from various sources and of the expenditure on various works of improvement and on establishments :—

	Amount	Percentages on total revenue.
	Rs.	%
Total revenue	11,46,986	100
Total expenditure to revenue	5,87,357	51.2
Expenditure A to total revenue	2,36,015	20.5
Do. B do.	3,51,342	30.6
Surplus to total revenue	5,59,629	48.8
Value of free grants	1,91,510	16.7
Percentages of total revenue obtained from—		
(1) Major produce (timber and fuel)	3,04,737	26.6
(2) Bamboos	65,431	5.7
(3) Grass and grazing	6,28,565	54.8
(4) Other minor produce	98,220	8.8
(5) Miscellaneous	50,033	4.4
Percentages of total revenue spent on—		
(1) Roads and bridges A-VII (a)	31,924	2.7
(2) Buildings—A-VII (b)	31,428	2.7
(3) Tanks and wells—A-VII (c)	14,624	1.3
(4) Fire protection—A-VIII (f)	33,691	2.8
(5) Other works—Cutting back operations A-VIII (g)	16,958	1.4
(6) Pay of all establishment—	2,86,675	24.9
(a) Conservator	18,366	1.6
(b) Superior Officers	31,173	2.7
(c) Subordinate establishment	1,35,547	11.8
(d) Office establishment	49,749	4.3

NOTE.—These figures exclude revenue and expenditure in connection with Bombay grass supply.

CHAPTER IV. ADMINISTRATION.

NORTHERN CIRCLE

243. *Charge of the Circle*—The charge of the Circle was held by Mr. M. Hill, till 2nd May 1913, and from 3rd May '913 by the writer of this report.

244. *Changes in the Constitution of Divisions*—Owing to the unwieldy size of the Mandla Division on the one hand and the very small size of the Narsinghpur Division on the other, the latter Division has been amalgamated with the Jubbulpore Division, under the name of the Jubbulpore-Narsinghpur Division. The Dhanwahi Range which actually forms part of the Mandla Civil District but was hitherto included in the Jubbulpore Division was amalgamated with the Mandla Division which was then divided into two Divisions, North and South Mandla. These changes in the constitution of the three Divisions were effected on 1st April 1913.

Two ranges of the Mandla Division were also broken up into four charges, Dindori into Dindori and Karanjia, and Shahpura into Shahpura and Saristal, with effect from the same date.

245. In the present report, however, the figures for the Mandla Division as it previously existed have been shown against Mandla and those for the Jubbulpore Division as it existed before, together with those relating to Narsinghpur, have been shown against Jubbulpore-Narsinghpur, to avoid complications.

246. *Changes in Gazetted Officers*—The changes which occurred during the year among gazetted officers are as follows:—

Imperial Officers—Mr. R. M. Williamson, Deputy Conservator of Forests, was transferred as Officiating Conservator of Forests to Assam and was relieved of the charge of the Hoshangabad Division on 3rd May 1913 by Mr. L. Mason, Assistant Conservator of Forests who was transferred from the Berar Circle, having been formerly attached to this Division. Mr. S. L. Kenny, Deputy Conservator of Forests, was in charge of the Mandla Division, as it originally existed, up to 31st March 1913, and of the South Mandla Division thereafter.

Mr. D. O. Witt, Deputy Conservator of Forests, was on privilege leave for 3 months from 2nd April 1913 on which date he was relieved of the charge of the Saugor Division by Mr. C. M. Harlow, Assistant Conservator of Forests, who was transferred from the Hoshangabad Division but was previously attached to the Saugor Division.

Mr. R. T. Jenkin, Assistant Conservator of Forests, joined the Imperial Forest Service on 24th December 1912, reported himself at Saugor on 29th December 1912 and was attached to the Hoshangabad Division from 26th March 1913 to the end of the year.

Mr. H. C. B. Jollye, Assistant Conservator of Forests, joined the Imperial Forest Service on 5th December 1912, reported himself at Jubbulpore on 9th December 1912 and remained attached to Mandla from 22nd December 1912 to the close of the year.

247. *Provincial*.—Rao Bahadur S. G. Paranjpe, Extra Deputy Conservator of Forests, was in charge of the Jubbulpore Division up to 31st March 1913 and thereafter of the Jubbulpore-Narsinghpur Division.

The three months' privilege leave granted from 1st May 1912 to Mr. W. G. J. Peake, Extra Assistant Conservator of Forests, in charge of the Damoh Division, covered the month of July 1912 during which the charge of the Division was held by Mr. V. C. Bhagwat, Extra-Assistant Conservator of Forests, who was then transferred to the Mandla Division to which he remained attached up to 27th June 1913, after which he was transferred to the Yeotmal Division in the Berar Circle.

Mr. Faiz Bakhsh, Extra-Assistant Conservator of Forests, on transfer from the Southern Circle was attached to the Chhindwara Division from 14th January 1913 onwards.

Mr. P. Shankarnath, Extra-Assistant Conservator of Forests, was in charge of the Narsinghpur Division up to 31st March 1913, and of the North-Mandla Division thereafter.

Mr. C. V. Sarwate, Extra-Assistant Conservator of Forests, on transfer from the Chhindwara Division was attached to the Saugor Division from 15th October 1912 onwards.

Mr. Nazir Abbas, Probationary Extra-Assistant Conservator of Forests, was appointed to the post substantively on 18th September 1912. He was attached to the Hoshangabad Division, and on expiry of his two months' privilege leave on 23rd November 1912 his services were placed at the disposal of the Bhopal State.

Mr. Shyam Sunder Lal, Probationary Extra-Assistant Conservator of Forests, and appointed substantively to the post on 18th September 1912, continued on foreign service in the Indore State.

248. *Rangers' Course*.—Of the two students who were deputed of training for the Rangers' Course for 1911-13 at the Dehra Dun Imperial Forest College, Deputy Ranger Lakshman Rao, of the Hoshangabad Division, who in 1909 had passed, by the Higher Standard, the Balaghat Forest School Examination passed with honours, and stood first in the order of merit and obtained no less than five medals. The second student passed by the Lower Standard.

Two stipendiary students were selected for that course for 1913-15. One student is now under training for the course for 1912-14.

249. *Balaghat School Training*.—Of the six students (five subordinates and one private stipendiary student) selected for training at the Balaghat Vernacular Forest School for the course for 1912-13, five passed by the Higher and one by the Lower standard and one, a subordinate, failed.

Two subordinates, one from Jubbulpore and the other from Chhindwara, had to come back from the school owing to their inability to follow the course.

Three subordinates and one private stipendiary students have been deputed for training for the current session.

250. *Office Inspection*.—Six Divisional Offices were inspected during the year by Mr. Hill, *viz.*, all except the Seoni and Chhindwara Divisions.

251. *Forest Inspection*.—Inspection Notes showing the results of inspection of forests in four Divisions, *viz.*, Jubbulpore, Damoh, Saugor and Hoshangabad, by Mr. Hill were submitted to the Chief Conservator of Forests.

252. *Punishments*.—The number of subordinates who were punished during the year is as follows:—

One Forester on being prosecuted was imprisoned, 39 Forest Guards and 1 orderly were dismissed; 1 Deputy Ranger, 1 Forester, 16 Forest Guards, 1 Orderly and 3 Range Moharrirs were degraded; 2 Foresters, 79 Forest Guards, 1 Mahawat, 1 License Vendor, 1 Grass Moharrir and 6 Orderlies were fined; and 2 Rangers, 1 Forester, 12 Forest Guards and 2 Clerks were suspended. The total number of subordinates punished was 170 or 15.40 per cent against 156 or 14.88 per cent during the previous year. The percentage of punishment in the Chhindwara Division was extremely high.

253. *Subordinate Service*.—The Divisional Forest Officers on the whole speak well of the work of the subordinate establishment. The names of the following Subordinates have been especially noted for good work. Ranger Govind Rao Sapre, Deputy Ranger Wahid Khan and Ram Ratan of Jubbulpore, Rangers Mohamad Hanif and Bhote and Deputy Ranger Ahmad Karim of Hoshangabad and Ranger S. J. Chati of Chhindwara.

254. *Office Establishment.*—As regards the office establishment it is found practically impossible to attract good men for a pay of Rs. 20 and more than half the total number of posts are of Rs. 20 and under. The proportion of low-paid posts to higher paid posts seems to call for some alteration.

The Divisional Forest Officers, Jubbulpore and Chhindwara, make special reference to the good work of their Head Clerks.

As regards the Conservator's Office the permanent Superintendent, who was on combined leave, retired on invalid pension on 19th May 1913. The work of the office, as a whole, was good and the Officiating Superintendent (now confirmed) Ram Charan Lal, and of the Accountant (now Assistant Superintendent) P. Mukhopadhyaya, and Clerks, Mohammad Mollafzul Karim and Lalji Saha, deserve special mention.

255. *Health.*—The year on the whole was a healthy one.

256. *Relation between Forest and Revenue Departments.*—The relations between the Forest and Revenue Departments were throughout satisfactory.

SOUTHERN CIRCLE.

257. The charge of the Circle was held by Mr. H. H. Haines, Conservator of Forests, upto 10th April 1913 when he proceeded on combined leave. He was relieved by the writer of the report who held charge of the Circle upto the close of the year.

258. The following changes occurred during the year among gazetted officers—

Mr. Townshend, Deputy Conservator of Forests, was transferred from the Berar Circle and was attached to the Raipur Division as Working-Plans Officer from 24th January 1913.

Mr. Bell, Deputy Conservator of Forests was transferred from the Berar Circle and was attached to the North Chanda Division as Working-Plans Officer upto 1st March 1913 when he assumed charge of the Division from Mr. Langhorne, Extra-Assistant Conservator of Forests, who was transferred to the Berar Circle.

Mr. Benskin, Assistant Conservator of Forests, was attached to the Direction Division from 21st September 1912 to 4th December 1912 when his services were placed at the disposal of the President, Forest Research Institute at Dehra Dun.

Mr. Faiz Baksh, Extra-Assistant Conservator of Forests, proceeded on three months' leave from the 2nd October 1912 and on expiry of his leave was transferred to the Northern Circle.

Mr. Cole, Extra-Assistant Conservator of Forests, proceeded on three months' leave from 17th March 1913, on expiry of which he was transferred to the Berar Circle. He was relieved by Mr. Narsingh Rao, Extra-Assistant Conservator of Forests, who was transferred from the Berar Circle and who held charge of the Division till the end of the year.

Mr. Anthony, Extra-Assistant Conservator of Forests, was transferred from the Berar Circle and attached to North Chanda Division from 23rd June 1913.

Mr. Laik Singh, Extra-Assistant Conservator of Forests, proceeded on three months' privilege leave from 7th March 1913, after expiry of which he was transferred to the Berar Circle.

Mr. McDonald, probationary Extra-Assistant Conservator of Forests, was transferred from the Berar Circle and posted to Chanda Division from 18th December 1912.

Two stipendiary students were sent to the Imperial Forest College, Dehra Dun, for the Rangers' Course and two stipendiary students returned from the Dehra Dun College with Higher Standard Certificates.

In the Raipur Division one Ranger was placed under suspension pending his prosecution which was undecided at the close of the year.

259 The pay of the clerical establishment, especially in the lower grades, is too low to obtain men with sufficiently good educational qualifications. Two men were sent up to the Remington Type writing Class and Conservator notices a tendency for clerks when they have learnt their work in the Forest Department to leave for better paid appointments in other offices. It is difficult to refuse applications from clerks to leave to improve their prospects and the only way of retaining them is to offer a somewhat higher initial salary.

260 Two Foresters, 24 Forest Guards, 2 Clerks, 1 Mahout and 1 Khalasi were dismissed; 4 Foresters, 17 Forest Guards and 2 Range Clerks were reduced; 3 Forest Guards and 1 Range Clerk were suspended and 1 Forest Ranger, 5 Foresters and 68 Forest Guards were fined. The proportion of punishments compared with the total strength was 14.3 per cent.

Thirteen Forest Guards, 1 Orderly and 1 Range Clerk on the permanent establishment died during the year.

261. *Inspections.*—The Inspector-General of Forests inspected the forests of the South Chanda Division with the Chief Conservator of Forests who also toured through the North Chanda Division. The Conservator of Forests accompanied the Inspector-General of Forests for part of his tour and also toured in the forests of the Bhandara and Nagpur-Wardha Divisions.

262. The relations between the Forest and Civil Departments have been cordial throughout the year except perhaps in the Balghat District. The thanks of the Conservator are due to Mr. Clarke, the present Deputy Commissioner, who has satisfactorily disposed of several questions in dispute.

263. *Balghat School.*—Twenty nine of the students admitted in 1912 were examined by a Board in February 1913 consisting of the Director and three Deputy Conservators. Thirteen students passed by the Higher Standard, thirteen by the Lower Standard and three failed to get a certificate of any kind; the State students showing up badly as only two out of nine succeeded in reaching the Higher Standard and two failed to get certificates. Thirty students were admitted during the year, of which 10 were from Native States. One State and three Government students were sent back as they could not follow the course and one student absconded. The Director complains that the present students are ill educated which makes it difficult for them to follow the course. The best officers have already been through the School course and it is getting difficult now to pick men from the present subordinate staff who are up to a sufficiently high standard of intelligence and education to benefit by the tuition. We shall have to wait till some of the older Deputy Rangers and Foresters retire when their places can be filled by younger and better educated men who will in the ordinary way go through the course. The Instructor Mr. Avasia, and Assistant Instructor, Ranger Sathe, have as usual done very good work.

BERAR CIRCLE.

264. The charge of the Circle was held throughout the year by the writer of this report.

265. Messrs. Chatterji and Inamati Shamarao held charge of Amraoti and Akola Divisions throughout the year.

In Melghat Mr. Bartlett held charge from 1st July to 10th August 1912 when he went on six months leave. Mr. Dunbar-Brander held charge of the Division till the end of the year.

In Buldana Mr. Pandurang Narayan was in charge from 1st July to 2nd August 1912. He was relieved by Mr. Townshend who held charge of the Division till 20th January 1913 when he was transferred to the Southern Circle and Mr. Parsons who relieved him held charge till the end of the year.

In Yeotmal the Division was held by Mr. Malcolm till 20th March 1913, when he undertook the preparation of the Working-Plan of the Division, being relieved by Mr. Thompson who held charge of the Division till the end of the year.

In Nimar Mr. Martin was in charge till 1st August 1912, when he proceeded on 1 year and 2½ months combined leave from 21st August 1912 and Mr Mason held charge of the Division upto 19th February 1913 when he was relieved by Mr. Bartlett who remained in charge till the end of the year.

In Betul Mr. Thompson held charge of the Division till 11th September 1912, when he proceeded on 3 months, privilege leave, handing over charge of the Division to Mr. Pandurang Narayan. On return from leave Mr. Thompson again held charge of the Division upto 11th March 1913 when he was transferred to Yeotmal Division, handing over charge to Mr. Langhorne who remained in charge upto 21st June 1913. On his transfer to foreign service Mr. Cole held the charge till 30th June 1913.

Mr. Donald was Working-Plans Officer of the Melghat Division till 28th February 1913, when he was transferred to the Forest College at Dehra Dun. Mr. Mason was placed in charge of the work upto 25th April 1913 when he was transferred to the Hoshangabad Division.

Mr. Narsingrao who was attached to Yeotmal Division was transferred to Bhandara Division in March and Mr. Mac Donald who was attached as a probationer to the same Division was transferred to Chanda Division in December last.

Messrs. Laiq Singh and Anthony received and handed over the duties of attached officer in Nimar Division on the 16th June 1913 on the latter officer's transfer to Chanda Division.

266. All Divisional Officers worked well during the year. Mr. Bartlett in Nimar had an attack of sun-fever at the beginning of the hot weather and could do little or no touring afterwards which was unfortunate in a large Division as Nimar. Mr. Dunbar-Brander very soon obtained a grasp of the somewhat difficult conditions through which the Melghat is passing.

267. Three stipendiary students returned from Dehra Dun College with Higher Standard Certificates. Of these N. Iyengar passed with honours and stood third on the list.

Two Deputy Rangers were deputed to Dehra Dun College for the Rangers' Course.

268. Seven Foresters were deputed to Balaghat Forest School. Of the seven students deputed last year all obtained certificates, three by the Higher Standard.

269. The following statement shows the number and nature of punishments awarded during the year:—

Rank.	Dis- missed.	Sus- pended.	Re- duced.	Fined.	Prose- cuted.	Services dispensed with.	Total.	Total strength of establish- ment.
Rangers	...	...	1	...	...	...	1	
Deputy Rangers	...	...	2	...	...	...	2	
Foresters	1	...	...	15	...	...	16	
Forest Guards	28	2	7	70	1	12	120	
Watchers	3	...	...	14	1	...	18	
Pass Vendors	3	...	...	4	...	4	11	
Naka Karkuns	2	2	...	1	1	...	6	
Clerks	...	1	...	...	...	...	1	
Orderlies	3	...	...	6	...	4	13	
Mahouts	...	...	...	1	...	...	1	
Jamadars	...	...	1	1	...	...	2	
Total	40	5	11	112	3	20	191	1,162

Thus a percentage of 16·4 of the total strength of the establishment was punished during the year.

Two Rangers, 3 Deputy Rangers, 3 Guards and one Clerk retired during the year.

One Deputy Ranger, 22 Guards, 8 Watchers, 4 Pass Issuers, 3 Clerks and 3 Orderlies resigned the service during the year.

270. On the whole the subordinate establishment worked fairly well during the year, but there is great room for improvement especially among the old hands many of whom are nonentities even if not actively mischievous. It will take some years to eliminate these men as they are generally too shrewd to commit any tangible offence. The remarks made in paragraph 241 of the Report for 1911-1912 may be repeated again this year. The pay given in the lower grades is barely a living wage and does not attract a suitable class of men. Forest Guards generally have a very brief service and the number who serve long enough to earn their retiring gratuity is insignificant.

271. The clerical establishment with a few exceptions worked well. There were difficulties in Amraoti which were improved by a change of Head Clerks, while in Buldana even more difficulty is experienced in getting clerks than in other Divisions. The pay and prospects of the lower grades in this service require improvement everywhere.

272. Thirteen Guards died during the year. The season generally was a healthy one due doubtless to its dryness. The Divisional Officer, Melghat, attributes the good health of his establishment very largely to the distribution of an adequate supply of quinine tabloids.

273. The Conservator inspected all the Divisional Offices except Amraoti and Yeotmal.

274. All Divisional Forest Officers report that they have inspected all Range Offices in their Divisions except the Divisional Forest Officer, Yeotmal, who has given no information on this point.

275. The relations between the Revenue and Forest officials everywhere were good, except in the Melghat where some friction occurred with the subordinate Revenue officials. A position of some difficulty was created owing to the antagonism of the Tahsildar, but since the close of the year the official at fault has been transferred by the Commissioner, and it is hoped that the difficulties in the settlement of the Melghat will not occur again with an officer of greater experience and tact.

CHAPTER V.

GENERAL.

NORTHERN CIRCLE.

Forest Village.

276. Two new forest villages were sanctioned during the year in Mandla, one of these being for settlement by Baigas from the Baiga Chak, as they wish to abandon their Bewars and take to regular cultivation.

One forest village was started in Saugor, three in Chhindwara and three in Hoshangabad. In Hoshangabad the villages have a general dislike for road work, more especially the Korku, and the Divisional Forest Officer does not recommend the further steady employment of the forest villagers on this work. The kodon and kutki crops, on which the Korku so largely depend, was a total failure in the forest villages in that Division and this necessitated the grant of further taccavi advances and the postponement of the recovery of previous advances.

277. *Malguzari Forests*.—In Mandla three malguzari villages were notified for protection under the malguzari rules. In Chhindwara 11 such village forests were brought under special protection under the orders of the Deputy Commissioner.

278. *Patch Cultivation*.—In Mandla one village was deserted during the year. In Chhindwara arrangements have been made for the relinquishment of patch cultivation on the death of the present occupiers and 30 plots, aggregating to 403 acres in that Division, have been relinquished during the year.

279. *Shooting Permits*.—407 shooting permits were issued by Divisional Forest Officers during the year against 427 in the previous year.

In Seoni 12 cases of poaching occurred during the year. Out of four cases prosecuted, convictions were obtained in two. Six cases were compounded and two were handed over to the Police.

280. *Elephants*.—There were six elephants at the close of the year, one for the Conservator and one for each of the five Forest Divisional Officers of Mandla, Jubbulpore, Saugor, Hoshangabad and Chhindwara.

281. *Arboriculture*.—Only four Divisional Forest Officers had opportunities of making observations on arboriculture. The Divisional Forest Officers Jubbulpore, Damoh and Saugor, are on the whole satisfied with the work. The Divisional Forest Officer, Seoni, observed that a large number of road-side avenue trees, chiefly *Albizzia* (Siris) and Pipal along the Jubbulpore-Nagpur road were badly infected with lac which is causing much damage to and disfigurement of the trees and recommends the sale of lac on road-side avenue trees to lac contractors being discouraged.

282. *Atmospheric Soil Moisture*.—As regards experiments in connection with the relation between forests and the retention of atmospheric and soil moisture, the subject is still under consideration.

SOUTHERN CIRCLE.

283. *Forest Villages*.—In Balaghat two ryotwari villages were taken over by the Department, the total amount of compensation paid being Rs. 5,827.

In Bilaspur two new villages were established and one of the existing villages abandoned. In South Chanda six villages were acquired and three abandoned, and in Raipur two malguzari villages were acquired by exchange. There were 281 forest villages at the close of the year.

284. *Taccavi*.—At the beginning of the year there were outstandings amounting to Rs. 19,550; during the year Rs. 9,356 was advanced as loans to forest villagers and Rs. 11,530 were recovered. Sums amounting to Rs. 97 were written off as irrecoverable and there was a balance at the close of the year of Rs. 17,279.

These taccavi advances are necessary to prevent forest villages being abandoned. An application was made during the year to write off a sum of Rs. 3,160 outstanding in the Lormi Range of the Bilaspur Division against certain villagers who formerly practising shifting cultivation were induced to settle down permanently. Sanction was received to write this off after the close of the year. The amount may be regarded as a set-off against successful fire protection in the Lormi Range which has been of great benefit to the forests. There is a great tendency for these tribes to stray off to Native States to practise shifting cultivation which has also been in vogue for many years in zamindaris adjoining Government forests but is gradually being suppressed.

285. Eight prospecting licenses and three mining leases were issued during the year, besides a mining lease for coal over 240 acres of Government forests in the Haveli Range of the North Chanda Division.

286. One hundred and seventeen shooting permits were issued during the year and the following animals recorded as killed by permit holders, etc.

Tigers	...	41	Bears	...	29	Sambar	48
Panthers	...	38	Bison	...	3	Chital	26
Wild dogs	...	50	Barasingha	12	Nilgai and other deer.	72	

Six wild dog's pups were caught and presented to the Maharaj Bagh in Nagpur where they died.

There are many complaints of lawful poaching of game particularly by malguzars who sit up in the hot weather over water to shoot any wild animal that comes down to drink. As there are no crops on the ground at this time of year gun licenses might be given on condition that guns were to be deposited in the kutchery during April, May and June when owing to the want of natural water pools wild animals run a great risk of being exterminated. This sitting up over water usually takes place outside the forest where the Forest Act does not apply. It is hoped that the orders recently issued for a close time for game will have some effect in preventing this indiscriminate poaching.

The Raipur Forest Officer reports that the Kamars create great havoc among game with their bows and arrows sitting up over water in the reserved forests in the same way in the hot weather; numerous carcasses of animals have been discovered with arrows sticking in them including two bison. This accounts for the few game to be found in the forests of this Division.

Bison and other large game suffered severely from rinderpest in the South Chanda Division and though this complaint attacked cattle in North Chanda, it does not appear to have spread to the wild animals.

287. The reboisement of Telankheri (Seminary) Hill continued under the Divisional Forest Officer, Nagpur-Wardha, who however can only give his personal attention to it in the rainy season. The method of sowing seeds on mounds of earth appears to be the one best suited to soil and climatic conditions, the former tending to get water logged in the rainy season. On very rocky ground these mounds were erected over pits varying from two to three feet deep. The common *nim* tree appears to be the hardiest of any in Nagpur and seedlings of this species stand transplanting when young. Anjan (*Hardwickia*) also does well from seed but owing to the extraordinarily rapid growth of its tap root in the first month will not bear transplanting.

288. Little is reported regarding roadside arboriculture. The Divisional Forest Officer, Raipur, states that delay in putting up gabions after planting, frequently leads to the plants being browsed down, after which their protection from cattle becomes a farce.

289. Three civil cases were brought against the Department by a purchaser who claimed that he had been cheated in the sales of coupe and grass bins which were sold to him by auction. These cases were pending at the close of the year but have since been dismissed by the Court. The thanks of the writer are due to the Standing Counsel, Mr. G. P. Dick for his able defence of the interests of Government.

BERAR CIRCLE.

290. *Forest Villages.*—Excluding Yeotmal where the formation of forest villages in Kinwat is in progress, there were 324 villages established as compared with 315 in the previous year. In Nimar six old sites were re-occupied and apparently the staff are learning the necessity of treating the people more reasonably than they used to do. In Melghat 12 new sites were selected as suited for settlement when occupants are available. At present a very large part of the population of the Melghat Taluq are in a state of uncertainty as to their real wishes and intended movements. Some have migrated from the reserves into the ryotwari, and others *vice versa*. Some have left the district altogether and of these some have returned. The Korku has no attachment to the land when it consists of red soil and migrates on the whim of the moment or for some trivial complaint. He requires a little black soil, freedom to trade in forest produce and tactful handling when his habits become more settled. As the Department depends entirely on the Korkus for the exploitation of all forest produce in the Melghat, the early completion of the Working-Plan to lessen the restrictions necessarily imposed in the new reserves and to regularize their working is very necessary.

291. The rates for forest produce for household requirements for consumption in the ryotwari area of the Melghat were revised in consultation with the Revenue Authorities, very low rates being fixed to carry out the orders of Government that the management of the newly constituted reserves should cause as little inconvenience as possible to the people.

292. In Betul two malguzari villages, Tirinahu and Sonaghati, were declared as requiring special protection and one village, Pandol, was released from protection.

293. Two-hundred and twenty four shooting permits were issued during the year against 201 in the previous year. The reports of animals shot are not complete, but 3 bison, 49 sambar, 16 chital and 191 other deer are reported to have been shot.

In Akola 62 special permits were issued to give effect to the Government orders for the destruction of pig and nilgai, 111 pig and 99 nilgai being killed in that district. In all 182 nilgai and 447 pig are reported to have been killed.

In the Amraoti Division a very large number of licenses issued in the neighbourhood of Amraoti are believed to be used for the purposes of trade in meat and hides of game. The number must be restricted in future to check abuse and to prevent the total extinction of all game in the neighbourhood of Amraoti where shooting within easy reach is a valued privilege of many subordinate officials.

294. The Agricultural Department continued the operations for catching the wild cattle in Bhongaon, but only 4 head were captured. A few doe chital were shot in the same reserve, but it will be necessary to enlist the assistance of Phansi Pardis if any real impression is to be made on the numbers of these animals.

295. *Elephants*—All the elephants in the Circle are in good condition. The Betul Divisional elephant is unreliable and sanction was received at the end of the year to dispose of her.

296. *Roadside Arboriculture*.—The Divisional Officer, Amraoti, reports that the replacement of *babul* by *nim* as an avenue tree is being continued and recommends again the adoption of mango and sissoo as suitable trees. In Buldana it is reported that the planting of trees does not receive the attention it deserves, while numerous gaps are being made in roadside avenues by the removal of trees to supply fuel for steam rollers. Reports from other Divisions are lacking on this subject.

H. H. FORTEATH,

Conservator of Forests, Northern Circle.

F. TRAFFORD,

Conservator of Forests, Southern Circle.

A. W. BLUNT,

Conservator of Forests, Berar Circle.

Review of the Forest Administration Reports of the Northern, Southern and Berar Circles of the Central Provinces for the year 1912-13.

At the close of the year the total area of forest under the control of the Forest Department was 20,572 square miles as compared with 21,038 square miles at the beginning, or a net decrease of 466 square miles:—

			Area on 1st July 1912.	Area on 30th June 1913
			Sq. miles.	Sq. miles.
Central Provinces	{ A Class	...	15,689	15,696
	{ B-I Class	...	1,924	1,496
Berar	{ A Class	...	2,154	2,155
	{ B "	...	84	84
	{ C "	...	1,153	1,117
	{ D "	...	34	24
			21,038	20,572

The area of the Central Provinces and Berar being 99,874 square miles the percentage of State forest to the whole of the Province is 20·6 or roughly one-fifth. The additions amounted to 30 square miles and were chiefly due to areas obtained by exchanges made for the simplification of boundaries, recalculation of areas and afforestation. The reduction in area amounted to 496 square miles, due mostly to the disforestation of B-I Class forest in Nimar (265 square miles) and Betul (108 square miles) for ryotwari Settlement, by exchanges (34 square miles), recalculation of areas, and other disforestments.

Satisfactory progress was made in regard to the disforestation of small blocks of C Class forest in Berar. By removing the small areas from the control of the Forest Department not only is the area of grazing land for the villages in the vicinity increased, but difficulties in regard to administration are removed and trouble to the people avoided.

2. The area finally settled during the year amounted to 14·5 square miles.
Settlements. In all cases, the Deputy Commissioners of the districts concerned were appointed to act as Forest Settlement Officers, so that no special expenditure was incurred.

Nineteen square miles for the Province as a whole were undergoing Settlement at the close of the year (Northern 6·14, Southern 5·49 and Berar 7·49). An area of 32 acres in North Chanda which has been shown as under Settlement for several years was excluded this year as it was decided to be undesirable to afforest the area in question. In addition to the above, the provision of the Land Acquisition Act were resorted to in order to acquire an area of 3·55 acres in the Betul Division to rectify a boundary, but proceedings for the Settlement of the plot were not instituted before the close of the year. Proceedings under the Land Acquisition Act were also started for the acquisition of various plots in Yeotmal and Akola with the object of creating them reserved forests.

3. The total expenditure on demarcation during the year was Rs. 23,585 against Rs. 19,309 in the preceding year. Exchanges of Government forests with malguzari areas necessitated 43 miles of new demarcation at a cost of Rs. 252. In addition, 78 new pillars were erected, 1,169 pillars reconstructed and 511 pillars dismantled at a total cost of Rs. 881, the total expenditure on new works being Rs. 933. The work done during the year comprised the thorough repair of all pillars over 4,008 miles of boundary line, the checking with the survey maps of 3,775 miles and the clearance, without reference to fire-protection of 8,953 miles: 23,289 pillars,

10,351 'worlies' and 279 'gotas' were also repaired. Progress was made, more particularly in Saugor in the simplification of boundaries, several exchanges of land with malguzars being made with this object during the year. The total length of the boundaries at the close of the year was 36,065 miles, the percentage of artificially demarcated boundaries being a little less than that in the previous year, 90.2 against 90.8. The length of natural boundary was 3,362 miles, and 170 miles of the new reserves formed in the Melghat were still to be demarcated at the close of the year.

The five year schemes for the up-keep of boundaries were sanctioned for the Jubbulpore, Damoh, Hoshangabad and Chhindwara Divisions. The Saugor scheme has been kept pending the revision and simplification of boundaries now in progress. For the rest of the Province as a whole the schemes were worked up to except in the case of the North Chanda and Raipur Divisions. The Conservator should impress on the Divisional Forest Officers concerned the importance of the matter. The Conservator of Forests, Southern Circle, reports that the condition of the boundaries in the Raipur Division leaves a great deal to be desired and may necessitate the employment of Surveyors in the following cold-weather.

4. The work carried out in Berar by the Survey of India, Party No. 6, comprised 124 square miles in Yeotmal, 97 square miles in Akola and 154 square miles in Buldana, with interior details on the 2-inch scale and boundary surveys on the 4-inch scale of 380 and 605 linear miles in Akola and Buldana, respectively. In the Melghat Division Rs 699 were spent on surveying the interior detail of 44 forest villages and a number of local surveys of forest villages was carried out in various Divisions of the Southern Circle.

5. The total expenditure on the constitution of State forests was Rs. 60,508 as compared with Rs. 41,584 in 1911-12, the Northern Circle being responsible for the entire increase, *viz.*, Rs. 28,690 against Rs. 8,603 due to the purchase of Indpura and Singora malguzari villages, Hoshangabad Division, at a cost of Rs. 20,000. The compensation paid to the Melghat Rajas for forest rights amounted to Rs. 15,557 as usual.

6. No new working-plans were sanctioned during the year, but good progress was made. Working-plans for the Nagpur-Wardha, South Chanda, Nimar and Buldana Divisions were completed during the year but are still in the press, while that for the Chhindwara Division was prepared and finally submitted by the Divisional Forest Officer by the end of the year, and received by the Chief Conservator after the close of the year. On account of Mr. Donald's deputation to the Imperial Forest College and there being no officer available for the work much progress could not be made with the working-plan for the Melghat Division, while the Akola plan is still under compilation. A beginning was made on the field work of the Yeotmal Working-plan. The revision of the Bilaspur Working-plan was completed during the year and the Local Government's orders on the special Revenue Officer's report have been issued since the close of the year. The work of revising working-plans for the Balaghat and Raipur Divisions continued to receive attention, but some delay is likely to be caused in both Divisions, more particularly in the latter owing to the maps of these forests not having been kept up to date. The field work on the working-plan for the Amraoti Division was completed during the year.

The Divisional Forest Officer, North Chanda, was appointed to revise the existing working-plans for the Division, but little progress has been made. The Conservator has represented that the supply of forest produce in this Division is almost twice the demand and that in view of possible disforests for irrigation projects in the future the revision of the plan might be postponed for the present. A new working scheme for the Garhakota high forest of the Saugor Division was prepared and a rough scheme for the Khanal Sal forests of the South Mandla Division was also compiled.

From Form No. 11 it will be seen that of the total forest area of 20,572 square miles, working-plans have been sanctioned for an area of 8,191 square miles, excluding 4,416 square miles of this area regarding which revisions of plans are in progress. New plans are being made for 8,862 square miles, and are not considered necessary for 3,497 square miles: a large part of this area consists of the B-I Class forests which are reserved for the extension of cultivation and are ultimately to be disforested for this purpose. The provisions of existing working-plans were worked up to as far as possible, the chief exceptions being in the Seoni, Akola and Betul Divisions, where owing to absence of demand and inaccessibility of the forest, fellings were considerably in deficit. The provisions of the revised working-plan for the Bori Reserve in the Hoshangabad Division could not be followed again this year owing to there being no purchaser for the coupes.

The only regular preliminary working-plan report sanctioned during the year was that for the Melghat Division, while the necessity having arisen in the Seoni Division for the revision of the existing working-plan, data are being collected for a preliminary report. In the meanwhile, however, a scheme of fellings for the ensuing year was sanctioned provisionally.

Annual Plans of operations were drawn up and adhered to with few exceptions and without material deviations, save in the Mandla Division where collection of harra had to be undertaken departmentally owing to inadequate offers for the purchase of the leases.

7. The following table compares the amount and cost of the work on communications carried out in the three Circles during the year under review and 1911-12 :—

Circle.	Year.	New works.		Repairs.		Total.
		Length.	Cost.	Length.	Cost.	Cost.
		Miles.	Rs.	Miles.	Rs.	Rs.
Northern	1912-13 ...	290	20,674	864	6,312	26,986
	1911-12 ...	277	17,473	820	4,678	22,151
Southern	1912-13 ..	95	23,881	1,751	14,507	38,388
	1911-12 ...	153	20,506	1,740	8,996	29,502
Berar	1912-13 ...	132	20,862	1,544	11,062	31,924
	1911-12 ..	152	6,005	1,345	9,691	15,696
Total	1912-13 ...	517	65,417	4,159	31,881	97,298
	1911-12 ...	582	43,984	3,905	23,365	67,349
	Difference ...	...	+ 21,433	...	+ 8,516	+ 29,949

The expenditure incurred during the year 1912-13 rose by Rs. 29,949, the cost of new works and of repairs being increased by Rs. 21,433 and Rs. 8,516, respectively. The increase in expenditure was chiefly in the Berar Circle. In the aggregate 210 miles of regular cart roads, 55 miles of coupe and feeder roads, 18 miles of inspection and other paths and 234 miles of alignments with road traces were constructed at a cost of Rs. 61,765, Rs. 1,319, Rs. 384 and Rs. 1,949, respectively, the average cost per mile in each case being Rs. 294, Rs. 24, Rs. 21 and Rs. 9. 82 miles of the regular cart roads were constructed in the Northern Circle, mainly in the Hoshangabad, and Damoh Divisions, while in the Southern and Berar Circles 63 and 65 miles, respectively, were made, the Divisions in which most of this work was carried out being Balaghat, Bilaspur and Raipur in the former Circle and Buldana, Akola and Nimar Divisions in the latter.

A special grant of Rs. 50,000 was allotted to the Forest Department during the year for road works. Out of this amount the sum of Rs. 35,000 was made over to the Public Works Department for the construction of the Weinganga

causeway (South Chanda Division), Dhamtari-Sihawa road, etc. The balance of Rs. 15,000 being allotted to the Conservators, Northern and Berar Circles, for roads.

In 1913-14, Government allotted the following grants for road works:—

Rs.
15,000 Imperial grant.
*25,000 " "
40,000 Provincial grant.

The Imperial grant of Rs. 15,000 was divided equally among the three Circles, while the Provincial grant of Rs. 40,000 was allotted to the Circles as follows:—

			Rs.
Northern Circle	...	...	8,500
Southern Circle	...	...	23,000
Berar Circle	...	...	8,500
			<hr/>
Total	...	...	40,000
			<hr/>

As regards the Imperial grant of Rs. 25,000, Rs. 21,700 were allotted to Northern Circle for road works in the Hoshangabad Division and the balance of Rs. 3,300 was placed at the disposal of the Public Works Department for the same purpose. The extra grant of Rs. 13,500 referred to by his Conservator, Northern Circle, in his report is the Provincial grant of Rs. 8,500 *plus* the Imperial grant of Rs. 5,000 mentioned above.

8. The total expenditure on buildings during the year amounted to Rs. 85,777, which exceeded that of the previous year by Rs. 11,308. The increase was shared by all Circles. Out of this sum Rs. 58,493 was spent on new works and Rs. 26,779 on repairs. Under new works there was an increase in each Circle, while under repairs all Circles, except Berar, showed a decrease. In addition to above, Rs. 180 in the Northern Circle and Rs. 325 in the Southern Circle were spent on pay of establishment, such as malis, etc. Good progress was made in almost every Circle in housing the subordinate staff, 68 per cent of the total outlay of Rs. 58,493 having been spent on this work. The Conservator, Berar Circle, however, observes that the housing of subordinates is still in a very backward state in some Divisions. The question of standard plans for Range Assistants' quarters was discussed in the Conservators' Conference held in June 1913 and an experiment to decide on a suitable plan is in progress. The problem regarding the housing of Forest Guards is somewhat difficult. It is essential that these subordinates should be provided with suitable accommodation, especially in unhealthy tracts, but, as the Conservator, Berar, points out, it is difficult to design buildings giving sufficient accommodation of substantial structure that are not unduly expensive. Rs. 12,800 or 22 per cent were spent on "Rest-houses", while other miscellaneous huts, etc., involved an expenditure of 8 per cent, or Rs. 4,683.

Out of the special grant of one lakh of rupees allotted to the Forest Department a sum of Rs. 40,000 was placed at the disposal of the Public Works Department for the construction of new buildings for the Forest School at Balaghat.

The principal works are —

The enlargement of the school building, new students' quarters and the construction of a hospital and more quarters for the staff.

9. The total expenditure on tanks, wells and other miscellaneous works during the year amounted to Rs. 36,202 as compared with Rs. 46,478 in the preceding year, the decrease occurring chiefly in the Berar Circle.

The amount spent on new tanks was Rs. 9,098 and on new wells Rs. 14,185, the expenditure on repairs being Rs. 3,073 and Rs. 3,956, respectively.

* From the special grant of one lakh allotted to the Forest Department in 1913-14.

In the Northern Circle the last section of the Patesur Tank (Seoni Division) was completed. The Cheola Baleh Tank (Saugor Division) continued to leak but is reported to hold water during the year. The Padrai Tank in the same Division, however, was practically dry by January. In the Southern Circle, the bund of the Naghiri Tank (Bhandara Division) burst, it was repaired at a cost of Rs 3,461, the total expenditure amounting to Rs 6,440

In the Berar Circle, the Kaiwani Tank (Nimar Division) was completed, but the Deputy Commissioner remarks that it is reported to be a failure. Good progress was made in this Circle in the construction of new wells, 29 being completed during the year and 9 being under construction. The Deputy Commissioner, Amraoti, has called attention to the urgent need of more wells in forest villages and in grazing areas in the Melghat, and the question of improving the water-supply by means of wells should receive the careful attention of the Conservator.

In the Nimar Division, 19 temporary bunds were thrown across nalas to hold up water in anticipation of a greatly increased demand for grazing during the hot weather. A similar bund was constructed in Yeotmal, the total cost being Rs. 710. It is not stated in how far the bunds served their purpose, but it would appear to be worthy of consideration whether more permanent bunds should not be constructed, as nalas closed in this manner are likely to form particularly suitable forms of tanks. In the Northern Circle, 7 wells were completed during the year and 9 were still under construction.

In the Southern Circle, 23 wells were constructed, 10 of these being in South Chanda Division and 5 in Balaghat Division.

The revision of the tank programme referred to in the review for 1911-12 is still under preparation, but it is hoped that it will be submitted to Government shortly.

The total outlay on roads, buildings, tanks, wells and miscellaneous works was Rs. 2,19,277, as compared with Rs 1,88,296 in the preceding year.

Forest offences.

10. The following statement shows how the offences of the year compare with those of 1911-12 and with the average of the past three years :—

Nature of offence	Northern Circle				Southern Circle				Berar Circle				Total.				Percentage of total cases of 1912-13.
	Average three years.	1911-12.	1912-13.	Increase or decrease as compared with 1911-12.	Average three years.	1911-12.	1912-13.	Increase or decrease as compared with 1911-12.	Average three years.	1911-12.	1912-13.	Increase or decrease as compared with 1911-12.	Average three years.	1911-12.	1912-13.	Increase or decrease as compared with 1911-12.	
I.—Injury by fire ..	273	217	136	—81	135	110	87	—23	80	47	37	—10	492	374	260	—114	2
II.—Unauthorized fellings.	1,611	1,548	1,810	+ 262	1,330	1,139	1,423	—17	1,134	1,202	1,595	+ 393	4,075	4,089	4,727	+ 638	45
III.—Unauthorized grazing.	1,084	975	1,255	+ 280	850	982	1,149	+ 167	1,287	1,168	1,676	+ 508	4,227	4,125	5,080	+ 955	48
IV.—Other offences.	53	61	76	+ 15	56	57	35	—22	201	220	485	+ 265	310	338	596	+ 258	5
Total	3,011	2,801	3,277	+ 476	2,380	2,488	2,693	+ 205	3,702	3,637	4,793	+ 1,156	12,103	12,930	16,743	+ 3,813	100

The cases of the year exceeded the average of the past three years by 1,560 and those of 1911-12 by 1,737. Whilst it is satisfactory to observe that there was a decrease of 114 in the number of cases of "Injury by fire" due mainly to a favourable season and more adequate precautions, it is somewhat disconcerting to see the increase compared with 1911-12 under the other three heads.

Under "Unauthorized fellings", there was an increase of 262 cases in the Northern Circle and 393 in the Berar Circle. The increase in the Northern Circle occurred in all Divisions except Saugor, and is ascribed to better vigilance on the part of the staff in detecting offences.

The reasons for the increases in the Berar Circle, which appear to have occurred chiefly in Buldana, Yeotmal and Nimar Divisions, are not clearly explained by the Conservator. He, however, notes that the restrictions now being introduced on the removal of produce from the newly constituted A Class reserves in the Melghat have not been enforced with undue severity on the Korku population since the increase in the number of unauthorized removals of produce was only 15 (from 52 to 67).

Under "Unauthorized grazing", the increases in the number of offences as compared with the preceding year were Northern Circle 280, Southern Circle 167 and Berar 508.

The increases are considerable, and are attributed in the Northern Circle to the tendency of the people to evade the new grazing rules: the most marked increases were in Damoh (114), Chhindwara (109) and Saugor (67).

In the Southern Circle, an increase occurred in all Divisions except Nagpur-Wardha Division, and is considered generally to be due to greater energy on the part of the staff.

In the Berar Circle, the most marked increases were in Buldana (216) and Yeotmal (254) and they are ascribed to the scarcity of fodder which led the people to graze their cattle in closed areas with the hope of escaping detection.

The Deputy Commissioner, Buldana, in commenting on the sudden rise (51·4 per cent) of grazing offences, whilst admitting that there was a scarcity of fodder, which, however, did not prove to be as acute as was feared, states that this scarcity does not wholly explain the large increase; he considers that the penalty recovered as compensation is often too low and that the amount should be substantially greater than the fines recovered at the cattle pound so as to be a real deterrent. Other Deputy Commissioners express similar views, and the Deputy Commissioner, Nagpur-Wardha, remarking "People do not graze cattle or cut wood without licenses through inadvertence and if the small number of such cases that are detected are leniently dealt with a kind of direct encouragement to illegal grazing or removal of produce is the result." In view of the fact that new grazing rules have recently been introduced for the Central Provinces and that the existing rules in Berar will probably be revised shortly, it is desirable that the rules should be worked with sympathy and leniency until they are fully understood by the people, at the same time when it is decided that compensation should be levied, the amount taken should be sufficient to act as a deterrent.

Out of the total number of cases of the year, 257 cases, or 2 per cent, were taken into Court; 9,887 cases, or 87 per cent, were settled by compensation under Section 67 of the Forest Act; 371 cases, or 3 per cent, remained undetected and 937 cases, or 8 per cent, were pending at the close of the year. Of the cases taken into Court convictions were obtained in 86, 76 and 75 per cent in the Berar, Northern and Southern Circles, respectively, the percentage for the Province as a whole being the same as last year, *vis.*, 79. The punishments inflicted by Courts are reported to have been on the whole adequate in all the Circles, except in the Chhindwara Division. It is stated that the District Magistrate has, however, taken action in the matter. The Conservator, Southern Circle, remarks that some Divisional Forest Officers do not appear to exercise sufficient discretion before sending cases up to Court as to whether the evidence is strong enough to ensure conviction or not. The most important case prosecuted during the year was that of a timber contractor in the Nimar Division who felled unmarked trees in his coupe and was sentenced to 6 months' rigorous imprisonment. The Conservator, Berar Circle, observes that this conviction and punishment have contributed largely to a serious decrease in the amounts bid for the current year's coupes. He further adds that this will have a salutary effect on the working of lessees for some time to come. The number of cases compounded was 9,887 and the average compensation

realized per case and per person were, respectively, Rs. 8-5-1 and Rs. 3-1-4 in the Northern Circle, Rs. 6-0-4 and Rs. 2-5-0 in the Berar Circle and Rs. 8-2-0 and Rs. 2-7-0 in the Southern Circle, where the compensation varies from Rs. 1-3-7 per head in North Chanda to Rs. 3-15-9 per head in Balaghat.

Rules for the regulation of timber and fuel in transit in the Yeotmal District were prepared with the concurrence of the Commissioner, Berar, and notified shortly after the close of the year. It is hoped that they will lessen the possibility for illicit removals of forest produce.

11. The following statements compare the results of fire-protection during the last three years and the origin of forest fires of the year under review with that of the preceding year —

Circle.	Year of protection.	Area protected, 1911-12	Area attempted to be protected	Failures.	Area actually protected	Cost	Percentage of area actually protected
		Acres	Acres.	Acres.	Acres.	Rs.	
Northern ...	1910-11	1,777,640	1,761,220	43,220	1,713,000	28,405	97
	1911-12	1,713,000	1,753,272	60,486	1,692,786	30,047	97
	1912-13	1,692,786	1,971,486	48,515	1,922,971	33,028	98
Southern ...	1910-11	2,980,064	3,230,064	59,837	3,170,227	54,581	98
	1911-12	3,170,227	2,968,095	46,386	2,921,709	45,771	98
	1912-13	2,921,709	3,098,263	49,945	3,048,318	48,054	98
Berar ..	1910-11	2,278,581	2,470,320	131,597	2,338,732	40,676	94
	1911-12	2,317,609	2,413,925	139,608	2,274,317	38,853	94
	1912-13	2,274,317	2,327,211	18,316	2,308,915	33,691	99
Total ..	1910-11	7,036,285	7,461,613	239,654	7,221,959	113,662	97
	1911-12	7,200,816	7,135,292	246,480	6,888,812	114,671	97
	1912-13	6,888,812	7,396,980	116,776	7,280,204	114,773	98
Square miles .	...	...	11,558	182	11,376	..	...

Origin of fire	Northern		Southern		Berar		Total, 1912-13		Total, 1911-12.	
	Number of fires	Acres burnt	Number of fires	Acres burnt	Number of fires	Acres burnt.	Number of fires	Acres burnt	Number of fires.	Acres burnt.
A — Burning lines	11	10,010	16	4,027	7	3,434	34	17,471	63	12,163
B — Crossing exterior lines.	12	3,654	14	13,731	2	825	28	18,210	42	34,365
C — Persons in forests (accidental)	27	13,283	28	10,382	12	3,126	67	26,791	75	95,720
D — Persons in forests (incendiary)	1	573	3	4,312	.	...	4	4,885	6	5,039
E — Railway Engines	3	160	5	1,035	1	95	9	1,290	7	1,769
F — Causes unknown ...	44	20,835	26	16,458	9	10,836	79	48,129	114	97,424
Total	98	48,515	92	49,945	31	18,316	221	116,776	307	246,480

The area attempted to be protected rose from 7,135,292 acres, or 11,149 square miles, in 1911-12 to 7,396,980 acres, or 11,558 square miles, in 1912-13. There was an increase of 218,214 acres and 130,168 acres in the Northern and Southern Circles, respectively, while the Berar Circle showed a decrease of 86,694 acres consequent on the removal from fire-protection of certain areas in the Betul Division and on the early burning instead of systematic protection of considerable areas in the Nimar Division. The chief increase in the Northern

Circle occurred in Mandla where protection was extended to the Khannat forests. The success attained in the fire-protection during the year under review was very satisfactory, 78 per cent of the area under protection having been successfully protected. The percentage of failure on the Northern Circle fell from 3 to 2, in the Southern Circle it was the same as last year, while in the Berar Circle there was an increase of 5 per cent in the success attained. Though some showers of rain in January and February delayed the work of finally burning the lines to some extent, yet fairly heavy and general rainfalls in the latter part of May shortened the season of danger and the heat and drought were neither so intense nor so prolonged as in recent seasons. It is satisfactory to be able to note that the policy of burning early areas where systematic protection could not be carried out was responsible to some extent for the success obtained. There was a gratifying decrease in the Northern and Berar Circles in the number of fires caused by carelessness in burning fire lines. The area burnt by this cause in the Damoh Division was, however, conspicuously large and the subordinates at fault have been suitably dealt with. There were in all 221 fires burning an area of 116,776 acres during the year under review against 307 which covered 246,480 acres in the preceding year. Practically complete success was attained in protection in the Akola, Amraoti, Yeotmal, North Mandla and Hoshangabad Divisions, the results being very good also in South Chanda, Bhandara, Melghat and Buldana, but in Damoh and Raipur the percentages of failure were 10 and 5, respectively. In the latter Division, one fire, which spread from the Madras border, burnt 10 square miles. It is hoped that some suitable arrangement will be agreed on with the Madras Government to prevent a similar occurrence. The greater area burnt in the Damoh Division was due, it appears, to the protective measures having been extended during the year to a considerably larger area.

The average cost per square mile of fire-protection for the Province fell from Rs. 10-4-7 in 1911-12 to Rs. 9-14-11 in the year under review. The highest cost (Rs. 18-0-10) was in the Amraoti Division, in which Division the cost of protection is always high owing to the small areas of the reserves. The high cost appears, however, to be susceptible of reduction.

12. Sixteen per cent of the total forest area was closed to all animals throughout the year and 2 per cent for a portion of the year in 1912-13 against 17 per cent and 2 per cent, respectively, in the year 1911-12. 82 per cent was open to the grazing of all animals, except browsers, for whom 35 per cent was available, the same percentages for the preceding year being 81 and 36, respectively. The proportion of total closure varies from Circle to Circle, being 13 per cent in the Northern Circle as in the last year and 22 and 10 per cent, respectively, in the Southern and Berar Circles, showing a decrease, in each case, of 2 per cent over those of 1911-12.

The total number of cattle impounded during the year compares as follows with that in the previous year :—

Circle.	1911-12	1912-13	Increase.
Northern	4,096	4,311	+ 215
Southern	4,691	3,384	—1,307
Berar	4,743	6,035	+ 1,292
Total	13,530	13,730	Increase 200

The increase in the Berar Circle is ascribed to animals straying from their herdsman owing to semi-starvation, while the reason for the marked decrease in the Southern Circle has not been given by the Conservator.

13. The effects of frost during the year were slight. A severe hailstorm passed over Seoni and Chhindwara, several trees were Protection against injury from natural causes. uprooted and great damage was done to the lac and mahua crops.

Considerable damage was caused by the teak defoliator (*Hyblœa puera*) especially in Betul and the Melghat. The teak in the Chhindwara, Seoni, Damoh and Jubbulpore Divisions also suffered. The bamboo weevil continued to cause damage, but now that its life history is more accurately known, it is hoped greatly, to reduce the damage in future. The injury caused by the sal borer is reported to be less than in the preceding year. It is satisfactory to learn that the damage done to babul by the beetle, *Corlosterna spinator*, has apparently been arrested by the thinning and pruning of young plants. The efforts to restrict the spread of *Loranthus* were continued in the Northern Circle, some 45,000 trees being freed from this pest.

In the Melghat 1,800 acres were cleared of lantana. This pernicious shrub does not at present constitute a serious menace to forest growth in this Province, but care must be exercised to prevent it extending. Good progress appears to have been made with the cutting of climbers and it is hoped that the experimental measures for the eradication of the Ironi creeper, which is abundant in the Southern Circle, will prove efficacious.

14. Whilst the production of seed of the more important species was satisfactory in the Northern and Southern Circles, it was Natural regeneration. poor in Berar, with the exception of the babul and khair.

Reproduction from seed in this Circle was also not satisfactory as a result probably of short rainfall. Natural regeneration in the Southern Circle is reported to be as poor on areas absolutely closed to grazing as on the open areas. The experiment of alternate opening and closing of areas for five years is being tried in some Divisions. Coppice reproduction was good in almost all Divisions save in the Berar Circle where only in Betul and parts of Akola Division satisfactory growth was reported.

15. The area of regular plantations at the close of the year was 820 acres. Of this 637 acres of teak, bamboo and sandal are in the Artificial reproduction. Northern Circle, 156 acres of sandal in the Southern Circle and 27 acres of bamboos in the Berar Circle.

In the Berar Circle the system of clear felling areas and then giving them out for cultivation for field crops combined with the sowing of forest seeds, was continued. 531 acres in babul bans and 140 acres in mixed scrub forest were treated in this way in Amraoti, Buldana and Akola Divisions. It is satisfactory to learn that in the area already worked under this system the results obtained in stocking the land are good. It is reported that the modifications in the rules, extending the period for the cultivation of cotton, appears to make the system more popular.

Various experimental sowings of different species were made, principally in the Northern Circle, but the results recorded are not very promising.

16. Regular thinnings are confined to the *Babul Bans* of the Berar Circle and were carried out over an area of 644 acres at a cost of Rs. 759 during the year against 937 acres and Rs. 950 respectively, in 1911-12. Operations for the improvement of the growing stock. Including the value of a small quantity of material unsold at the close of the year the revenue derived from these operations was Rs. 2,518 against Rs. 1,687 in the preceding year.

Besides the above operations the young growing stock of babul was pruned and thinned over 411 acres at a cost of Rs. 640.

The following statement compares the cutting back operation carried out during the year under review with those in 1911-12 :—

Circle.	Year.	Area in acres.	Cost.	Revenue	Remarks.
1	2	3	4	5	6
			Rs	Rs.	
Northern	1912-13	27,775	7,774	4,122	
	1911-12	21,890	5,364	1,114	
Southern	1912-13	6,503	2,021	1,391	
	1911-12	5,160	2,749	3,041	
Berar	1912-13	41,063	14,259	5,869	
	1911-12	37,298	10,447	13,358	
Total	1912-13	75,341	24,054	11,382	Rs 727 value of material unsold at the close of the year, and Rs 335 being the value of the balance of last year's stock sold.
	1911-12	64,357	18,560	17,563	

Good progress was made in this important work on which the future of the forests so much depends in the Northern and Berar Circles. In the Southern Circle, however, from the figures available it does not appear that it is receiving the attention it deserves; there was a slight increase in the comparatively small area worked over, but this is apparently more than accounted for by the fact that the work hitherto shown as improvement fellings in the South Chanda Division has this year been included in the cutting back operations. The Conservator states that the work is carried out by purchasers under the terms of their agreements, as well as departmentally, but this is true to a large extent in the case of the other Circles. The exact progress made should be more clearly shown in the next year's report. The work is of such importance that a considerable expenditure is justified without reference to the revenue that may be derived from the sale of the produce obtained from the operations.

17. Experiments were carried out in all Circles for the purpose of Experiments ascertaining the rate of growth of trees of various species, the rate of coppice growth, the effect of thinning on coppice shoots, the yield of grass for fodder on different soils and under varied conditions, and the incidence of cattle grazing and its effect on forest growth. In the Northern Circle experiments to test the effect of the season on felling in coppice reproduction were again conducted under the directions of the Forest Botanist. In the Damoh and Saugor Divisions of this Circle experiments to ascertain the effect of forest fires in different months on tree growth and development of forest crop are being continued. Lac was experimentally planted on some *palus* and *ghont* trees in Jabulpore Division, while in the Hoshangabad Division a small area was planted and sown with "tur" and the plants were infected with lac. It is reported that Chir Pine is doing well in Balaghat, and Sandal wood is tending to produce itself naturally from the seed from the plantations in North Chanda. Sample plots to ascertain the most suitable intensity for thinnings in babul bans, to investigate the varieties of babul, and to determine the correct height for pollarding *anjana*, and to ascertain the best conditions for seed regeneration of the same species were maintained in Buldana, Akola and Nimar Divisions. In Betul 300 sleepers of saj were treated under the direct supervision of the Forest Economist with zinc chloride and heavy oil. The sleepers are to be made over to the Great Indian Peninsula Railway for trial. Experiments in tapping salai for resin were continued in Nimar and Melghat, those in the former division being more promising. Investigations to determine the best method of eradicating the Ironi Creeper in the Southern Circle were continued. It is to be regretted that not much progress was made in improving the methods of recording statistics in regard to sample plots.

18. The statement given below compares the areas in which the various methods of treatment were employed during the year with those in the previous year :—

Circle.	Clear felling.		Selection felling.		Improvement felling.		Coppice with standard.		Thinnings of poles.		Total.	
	1912-13	1911-12	1912-13	1911-12	1912-13	1911-12	1912-13	1911-12	1912-13	1911-12	1912-13	1911-12
1	2	3	4	5	6	7	8	9	10	11	12	13
	Acres.	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres
Northern	..		2,591	2,490	24,264	28,383	14,051	9,726	.		40,908	40,699
Southern			480	465	18,361	11,350	40,290	40,096		..	59,137	53,911
Berar	578	460			28,185	27,114	21,080	13,189	.		52,043	40,763
Total	578	460	3,071	3,055	71,060	68,847	77,423	63,011	.		1,52,058	1,35,373

From this it will be seen that there was a satisfactory increase of 16,715 acres in the area subjected to systematic fellings. The increases occurred mostly in the Berar and Southern Circles. There were, however, considerable deficits under the new Bhandara and Nagpur Working-plans and this matter should receive attention of the Conservator.

In addition to the above, unregulated fellings were made in C class areas of the Berar proper and in the nistar areas of the Betul and Nimar Divisions, while in the Northern Circle these fellings were carried out in all the Divisions, except Chhindwara, and were restricted generally to the nistar areas as well as to those in which the prescriptions of the regular working-plans were held in abeyance. In the Mandla Division these fellings were permitted to the extent of removal of teak and saj timber from excised areas and ryotwari waste.

The orders of Government on the question of restricting unregulated fellings by commuters in the Mandla Division (referred to last year) were issued after the close of the year. The rules now to be brought in force cannot fail to have a beneficial effect.

19. The following statement compares the principal kinds of minor forest produce extracted from the forests during the year and the revenue realized with the results of the preceding year :—

Kind of produce.	Northern.		Southern.		Berar.		Total.	
	1911-12.	1912-13	1911-12	1912-13	1911-12.	1912-13.	1911-12	1912-13
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Harra	14,065	22,579	34,442	20,060	2,460	1,951	50,967	44,590
Lac	16,622	15,353	14,715	10,075	1,683	614	33,020	26,042
Mohwa and Achar	7,263	4,471	6,342	2,346	1,605	1,204	15,210	8,021
Hides and horns	9,315	7,600	5,565	5,296	3,239	4,211	18,119	17,107
Bamboos	54,761	57,855	1,00,961	1,05,686	81,098	71,626	2,36,820	2,35,107
Fodder grass	1,20,961	81,424	52,597	23,051	1,97,034	1,66,794	4,28,389	3,36,462
Thatching grass			57,797	65,193				
Russa grass	185	..	..	..	33,664	33,491	33,849	33,491
Minerals	3,148	..	1,723	3,176	9,527	10,041	14,398	13,217
Miscellaneous	..	..	13,711	19,849	..	..	13,711	19,849
Total	2,26,320	1,89,282	2,87,853	2,54,732	3,30,310	2,89,932	8,44,483	7,33,946

The revenue from these products fell from Rs. 8,44,483 in 1911-12 to Rs. 7,33,946 in the year under review, there being a decrease under each head, the items chiefly responsible for it being grass, harra, lac and mohwa and achar. The fall in the value of grass was mainly due to the fact that the 1911-12 figures included revenue from the supply during the preceding year to the Bombay Presidency, though the 1912-13 figures include Rs. 54,000 on this account in the Northern Circle. There was an increase under harra in the Northern Circle as a result of the departmental operations in the Mandla Division, the decrease in the Southern and Berar Circles being due to the poor crop.

The following statement shows the total number of animals grazed and the value of the grazing at full rates, compared with the revenue actually received :—

Grazing.								
Circle	Year.	Buffaloes	Cows and bullocks.	Sheep and oats.	Other animals	Total animals.	Value at full rates.	Revenue actually received.
1	2	3	4	5	6	7	8	9
							Rs.	Rs.
Northern ..	1911-12	203,231	1,180,250	92,830	5,829	1,487,140	4,32,807	2,82,989
	1912-13	175,358	1,020,329	73,034	4,872	1,273,593	6,62,823	4,65,269
Southern ..	1911-12	82,676	706,994	114,771	440	904,881	2,33,696	1,55,657
	1912-13	78,895	687,095	102,937	617	869,544	4,25,485	2,74,239
Berar (Nimar and Betul only).	1911-12	58,425	272,799	1,632	482	333,338	1,55,168	1,15,742
	1912-13	58,530	276,736	2,311	354	337,931	1,75,034	1,30,319
Total Central Provinces (proper).	1911-12	349,332	2,160,043	209,233	6,751	2,725,359	8,21,671	5,54,388
	1912-13	312,783	1,984,160	178,282	5,843	2,481,068	12,63,342	8,69,827
Berar (proper) ...	1911-12	164,348	1,094,140	416,858	3,544	1,678,890	3,65,366	3,21,781
	1912-13	166,543	1,093,875	491,794	3,478	1,755,690	3,87,946	3,47,380
Total Central Provinces.	1911-12	513,680	3,254,183	626,091	10,295	4,404,249	11,87,037	8,76,169
	1912-13	479,326	3,078,035	670,076	9,321	4,236,758	16,51,288	12,17,207
Difference .	...	-34,354	-176,148	+43,985	-974	-167,491	+4,64,251	+3,41,038

While there was an increase of 81,393 in the number of animals grazed in the forests of the Berar Circle, the number in the Northern and Southern Circles showed a decrease of 213,547 cattle and 35,337 cattle, respectively. For the Province as a whole the number grazed fell from 4,404,249 to 4,236,758, or a decrease of 167,491. Although the number of cattle grazed decreased, the total value of the grazing at full rates shows an increase of Rs. 4,64,251, the increase in the revenue actually realized being Rs. 3,41,038 due to the introduction of the new grazing rates in the Central Provinces proper.

It is satisfactory to observe from the remarks made by several Deputy Commissioners that the new rules appear to be working smoothly and successfully and that the rise in rates has not been seriously felt. The question of revising the rules to prevent an excess number of ploughs over the number of actual "working" ploughs being claimed by agriculturists in order to increase the number of cattle at privileged rates is under consideration.

The grazing incidence per head of cattle in the Northern Circle ranged from 2.17 acres in the Chhindwara Division to 6.78 acres in Hoshangabad, the

average incidence for the Circle being 3·2 acres per head. In the A class forests of the Berar Circle the maximum and minimum incidences were 7·2 in the Melghat and 1·2 in the Amraoti Divisions respectively, while in the C class forest the incidence was, as usual, less than one acre per head. The incidence in the Southern Circle was 4 acres per head. Excluding the areas closed to grazing throughout the year the average incidence for the Province as a whole was 2·6 acres.

In the Central Provinces proper the number of animals grazed at privileged rates was 1,170,871 against 1,283,247 grazed at full rates, while 26,950 cattle grazed free, the respective numbers for the preceding year being 1,062,614, 1,289,513 and 19,695. In Berar the number grazed at privileged rates was 200, at full rates 1,548,610 and free 206,880. The total value of the grazing concessions in the three Circles amounted to Rs. 4,34,081 against Rs. 3,10,868 in 1911-12. Of the cattle grazed at full rates 586,925 paid the ordinary rates, 86,634 paid nomadic rates and 609,688 paid commercial rates, against 1,027,871, 134,155 and 129,487 respectively during the year 1911-12. It is satisfactory that there has been a considerable increase in the cattle of the last category.

20. The total outturn of major forest produce during the year under review as compared with that of the preceding year is shown in the following statement :—

Circle.	Year.	Timber.					Fuel					Total
		Government.	Purchasers.	Free grantees.	Right holders.	Total.	Government.	Purchasers.	Free grantees.	Right holders.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13
		Cft.	Cft.	Cft.	Cft.	Cft.	Cft.	Cft.	Cft.	Cft.	Cft.	Cft.
Northern {	1911-12	171,861	1,577,897	28,616	...	1,779,374	149,160	3,889,600	253,602	...	4,491,362	6,271,736
	1912-13	359,381	2,341,553	24,163	...	2,725,097	538,921	4,642,931	276,493	...	5,458,345	8,183,442
Southern {	1911-12	368,697	3,379,463	110,627	...	3,858,787	515,987	15,217,001	482,366	...	16,245,154	20,104,241
	1912-13	340,891	5,033,201	72,128	...	5,446,220	411,592	15,382,662	544,927	...	16,339,181	21,785,401
Berar ...	1911-12	196,585	817,238	19,967	31,124	1,084,938	253,742	9,617,281	273,352	1,421,812	4,566,189	5,651,127
	1912-13	187,158	822,568	32,678	74,364	1,116,768	256,699	3,381,984	320,327	1,374,019	5,334,029	6,450,797
Total ...	1911-12	738,147	5,794,618	159,210	31,124	6,723,099	1,148,789	21,723,884	1,009,520	1,421,812	25,304,005	32,027,104
	1912-13	887,430	8,107,322	128,969	74,364	9,288,085	1,307,212	23,408,577	1,141,747	1,374,019	27,231,555	36,419,640

There was a very satisfactory increase of 2,564,986 cubic feet in the outturn of timber. The increases were mainly in the Northern Circle (945,723 cubic feet) and Southern Circle (1,587,433 cubic feet).

There was a considerable increase (1,827,550 cubic feet) also in the outturn of fuel in which all Circles contributed, the important increases being, however, in the Northern Circle (965,983 cubic feet) and Berar (767,840 cubic feet).

The proportions of the total outturn removed by Government Agency were timber 9·5 per cent, fuel 4·4 per cent and total 5·7 per cent, as compared with 11·5 and 6 per cent respectively in 1911-12.

It is desirable that the exploitation of the forests should be, as far as possible, by the agency of purchasers, and this is now generally the case, departmental agency as a rule only being resorted to with the object of inducing contractors to take up the work later on, when they see that it can be carried out at a profit. Departmental operations were undertaken in Damoh and Bilaspur with this object during the year.

21. The total value of minor forest produce removed from the forests during the year as compared with 1911-12 is shown in the following statement —

Circle	Year.	Bamboos	Grass.	Grazing	Other minor produce	Total.
1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
Northern	1911-12	54,761	1,20,961	2,87,139	86,715	5,49,576
	1912-13	57,855	81,421	4,69,701	93,767	7,02,747
Southern	1911-12	1,00,961	52,597	1,57,680	1,34,295	4,45,533
	1912-13	1,05,686	23,051	2,76,737	1,25,995	5,31,469
Berar	1911-12	81,098	1,97,034	4,82,361	86,036	8,46,532
	1912-13	71,626	1,66,794	5,20,026	89,699	8,48,145
Total	1911-12	2,36,820	3,70,592	9,27,183	3,07,046	18,41,641
	1912-13	2,35,167	2,71,269	12,66,464	3,09,461	20,82,361
		-1,653	-99,323	+3,39,281	+2,415	+2,40,720

It will be seen from the above that the revenue obtained during the year under review rose by Rs. 2,40,720 for which the grazing receipts are responsible. The fall in the value of the grass was due to the cessation of operations for the supply of grass to the Bombay Presidency though receipts of Rs. 54,000 in the Northern Circle are included. If the revenue derived from these operations is excluded from the figures of both years it will be seen that the results of the year under report were very favourable, the increase being Rs. 4,12,752, which was shared by all the Circles as shown below :—

Circle	Bamboo	Grass	Grazing.	Other	Total
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
Northern	+3,094	-2,321	+1,82,562	+7,052	+1,90,387
Southern	+4,725	+18,584	+1,19,057	-8,300	+1,34,066
Berar	-9,472	+56,446	+37,662	+3,663	+88,299
Total	-1,653	+72,709	+3,39,281	+2,415	+4,12,752

The increase under the revenue from grazing was due to the introduction of the new grazing rules

Attempts to induce agriculturists to buy baled grass were continued during the year and each Circle report contains an interesting account of the experiments undertaken.

It must be admitted, however, that the results obtained are not encouraging. Of 146 tons of baled grass cut and baled in the Northern Circle only 29½ tons were disposed of to agriculturists. In the Southern Circle of 207 tons baled, agriculturists only took 2 tons. In Berar they purchased apparently 174 tons out of 343 tons cut and baled.

In the Northern Circle 8 tons of loose grass were taken by agriculturists out of 25 tons cut.

By selling the balance of grass to other purchasers the results financially were not unsuccessful, the expenditure and revenue being as follows :—

Circle.		Expenditure.	Revenue.
1		2	3
		Rs	Rs.
Northern	...	1,356	1,083
Southern	...	2,794	5,035
Berar	..	5,876	8,160
Total		10,026	14,278

Whilst the efforts to induce agriculturists to use baled grass and thus extend the practice of stall feeding have not met with success so far, they might be continued for another season on a small scale in likely localities, more attempts being made to sell grass loose, where it is preferred in this form to baled grass. It appears also that there is a demand by other purchasers for baled grass, and this is a source of revenue that should not be overlooked.

Right holders, free grants and concessions 21. The following statement compares the value of forest produce given free or at reduced rates during the year with that of the previous year :—

Circle.		Right holders		Free grants.		Concessions.		Total.	
		1911-12	1912-13.	1911-12.	1912-13	1911-12	1912-13.	1911-12	1912-13
1		2	3	4	5	6	7	8	9
		Rs.	Rs.	Rs.	Rs	Rs.	Rs.	Rs	Rs.
Northern	..	.	...	12,243	11,300	1,12,258	97,571	1,24,501	1,08,871
Southern	...	..	...	15,532	17,649	1,26,776	1,72,045	1,42,308	1,89,694
Berar	..	51,578	39,445	58,597	63,594	87,991	92,552	1,98,166	1,95,591
Total		51,578	39,445	86,372	92,543	3,27,025	3,62,168	4,64,975	4,94,156

23. Below is shown the outturn of major produce and the value of the outturn of minor produce extracted by all agencies as compared with those of the year 1911-12 :—

Circle.	Timber		Fuel.		Bamboos.		Grass.		Grazing.		Other minor produce	
	1911-12	1912-13	1911-12	1912-13.	1911-12.	1912-13.	1911-12	1912-13	1911-12.	1912-13.	1911-12.	1912-13
1	2	3	4	5	6	7	8	9	10	11	12	13
	Cft	Cft.	Cft	Cft	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs.
Northern	1,779,374	2,725,097	4,492,362	6,488,345	54,761	57,855	1,20,961	81,424	2,87,129	4,69,701	86,716	91,787
Southern	3,858,787	5,446,220	16,245,454	16,349,181	1,00,961	1,05,686	52,597	23,081	1,37,682	2,76,737	1,34,225	1,25,995
Berar	1,084,938	1,116,768	4,556,789	5,334,029	81,098	71,626	1,97,024	1,66,794	4,82,364	5,20,026	85,035	89,699
Total	6,723,099	9,288,085	25,304,005	27,171,555	2,36,820	2,35,167	3,70,552	2,71,299	9,27,181	12,66,464	3,07,046	3,09,481

24. The following statement compares the financial results of 1912-13 with those of 1911-12 and with the average of the five years ending in 1910-11 :—

Circle.	Year	Revenue	Expenditure.			Surplus.	Percentage of net revenue to gross revenue.
			A	B.	Total		
1	2	3	4	5	6	7	8
			Rs.	Rs.	Rs.		
Northern	Average 1906-07 to 1910-11.	5,63,074	1,59,254	3,01,069	4,60,323	1,02,751	18
	1911-12	7,89,414 (6,98,198)	2,52,872 (1,63,957)	3,43,804 (3,43,804)	5,96,676 (5,07,761)	1,92,738 (1,90,437)	24 (27)
	1912-13	9,72,853 (9,18,853)	2,55,164 (2,10,164)	3,65,649 (3,65,649)	6,20,813 (5,75,813)	3,52,040 (3,43,040)	36 (37)
Southern	Average 1906-07 to 1910-11.	6,89,509	2,86,040	3,16,251	6,02,291	87,218	13
	1911-12	7,60,145 (7,12,015)	2,87,173 (2,48,341)	3,76,590 (3,76,590)	6,63,763 (6,24,931)	96,382 (87,984)	13 (12)
	1912-13	9,53,413 (9,53,413)	2,57,876 (2,57,876)	3,75,625 (3,75,625)	6,33,501 (6,33,501)	3,19,912 (3,19,912)	34 (34)
Berar	Average 1906-07 to 1911-11.	9,30,461	2,14,539	2,82,053	4,96,592	4,33,869	47
	1911-12	11,16,620 (10,29,943)	2,58,423 (1,78,089)	3,35,891 (3,35,891)	5,94,314 (5,13,980)	5,22,315 (5,15,993)	47 (50)
	1912-13	11,95,622 (11,46,986)	2,77,075 (2,36,015)	3,51,342 (3,51,342)	6,28,417 (5,87,357)	5,67,205 (5,59,629)	47 (49)
General	1910-11	...	35,624		35,624	35,624	...
Direction	1911-12	...	40,623		40,623	40,623	...
Division	1912-13	...	44,209		44,209	44,209	...
Total	Average 1906-07 to 1910-11.	21,83,044	6,59,833	8,99,373	15,94,830	5,88,214	27
			35,624				
	1911-12	26,66,188 (24,40,156)	7,08,468 (5,90,387)	10,56,285 (10,56,285)	18,95,376 (16,87,295)	7,70,812 (7,52,861)	29 (31)
			40,623				
	1912-13	31,21,888 (30,19,252)	7,90,115 (7,04,055)	10,92,666 (10,92,616)	19,26,940 (18,40,880)	11,94,948 (11,78,372)	38 (39)
			44,209				

NOTE.—Figures in brackets are exclusive of Bombay grass operations.

Bombay grass operation ... 1,02,636 86,060 ... 86,060 16,576

Omitting the revenue and expenditure in connection with operations undertaken to supply fodder grass to the famine distressed districts of the Bombay Presidency from both the years, and comparing the results with the year 1911-12 it will be seen that the revenue increased by Rs. 5,79,096 and that the expenditure and the surplus rose by Rs. 1,53,585 and Rs. 4,25,511 respectively, the percentage of the net revenue to gross revenue being 39 against 31. This is an appreciable increase, and the proportion should improve yearly. The grass operations referred to above yielded a revenue of Rs. 1,02,636 while Rs. 86,060 were spent on them, leaving a profit of Rs. 16,576. During the year these operations were confined to the Northern and Berar Circles. The satisfactory increase in the revenue has been contributed by all the Circles and timber and grazing are responsible for nearly the whole of it. The Chief Conservator is glad to be able to note that this year the Southern Circle has shown a great improvement, the surplus being Rs. 3,19,912 against Rs. 87,684 in the preceding year and a deficit of Rs. 35,522 in 1910-11. The increase in the grazing revenue was as pointed out above due to the introduction of the new grazing rules, while better prices from sales of coupes and the payment of first instalment of the lease money by the Allapilli contractor in the South Chanda Division and by the Bengal Timber Trading Company in the Balaghat went to raise the income from timber.

The sources of income during the last two years are compared in the following statement:—

Particulars of revenue.		1911-12.	1912-13.	Increase or decrease
1		2	3	4
		Rs.	Rs.	Rs.
Timber and other produce removed by Government Agency	...	3,08,096 (82,058)	2,61,830 (1,59,194)	— 46,266 + (77,136)
Timber and other produce removed by purchasers, &c.				
Timber	..	4,55,797	5,73,122	+ 1,17,325
Firewood and charcoal	..	2,28,836	2,66,262	+ 37,426
Bamboos	...	2,10,487	2,11,017	+ 530
Grazing and fodder grass	...	10,52,415	14,09,369	+ 3,56,954
Other minor produce	...	3,01,167	2,73,436	— 37,731
Miscellaneous	...	1,09,396	1,36,852	+ 27,456
Total	..	26,66,188 (24,40,156)	31,21,888 (30,19,252)	+ 4,55,700 + (5,79,296)

There was an increase under each head except "other minor produce" under removals by purchasers and it is satisfactory to note that this increase has again occurred under timber and fuel which indicates that the demand for major forest produce is steadily increasing.

With a continuance of the policy of opening out the forests by suitable communications, the exploitation of timber, fuel and bamboos should steadily increase. The introduction of revised grazing rates will go far to improve the source of revenue and it is desirable now specially to consider how better financial results can be obtained from the disposal of minor forest products. This matter was discussed at the last Conservators' Conference, and the Chief Conservator desires to call the attention of Conservators and Divisional Forest Officers to the necessity of giving careful consideration to these sources of revenue, and would invite attention to the following as being likely to repay special study.—

- (i) The manufacture of tanning extracts from babul bark, and myrabolans,
- (ii) the manufacture of Rusa oil, and oil from Kusum seed, (iii) the disposal of fodder grasses.

Investigations have already been commenced in regard to most of the above. in consultation with the Forest Economist, and with the assistance of the Tanning expert good progress should be made, and more satisfactory financial results obtained.

Excluding the Bombay figures the expenditure under A shows an increase from Rs. 5,90,387 in 1911-12, to Rs. 7,04,055 in 1912-13. This increase was due to the enhanced commission paid to license vendors owing to the increased revenue, departmental collection of harra in Mandla, and departmental operations of timber and fuel in Damoh, more expenditure on roads, buildings and other operations for improvement of the forests and to the payment of Rs. 20,000 as the purchase money of the Indpura and Singora Malguzari villages in the Hoshangabad Division.

The percentage of revenue to expenditure of the total revenue obtained from various sources and of the total revenue spent on various works of improvement and organization and on establishment are exhibited in the following statement.

	Northern.	Southern.	Berar	Province
	1	2	3	4
	Per cent	Per cent.	Per cent.	Per cent
Total expenditure to Revenue	63	66	51	60
Expenditure A to total Revenue	23	27	20	23
Expenditure B to total Revenue	40	39	31	37
Surplus to total Revenue	37	34	49	40
Percentage of total Revenue obtained from—				
(1) Major produce, timber and fuel	26	42	26	31
(2) Bamboos	6	10	6	7
(3) Grass and grazing	53	30	55	46
(4) Other minor produce	10	14	8	11
(5) Miscellaneous	5	4	5	5
Percentage of total Revenue spent on—				
(1) Roads and bridges (A VII-a)	3	4	3	3
(2) Buildings (A VII-b)	2	4	3	3
(3) Tanks, wells, etc (A VII-c)	1	2	1	1
(4) Fire protection (A VIII-f)	4	5	3	4
(5) Other works cutting back operations, etc. (A VIII-g).	1	1	1	1
(6) Pay of establishment	33	31	25	29
(a) Conservators	2	2	2	2
(b) Superior officers	11	10	7	9
(c) Subordinate establishment	15	13	12	14
(d) Office establishment	5	6	4	5

NOTE.—These figures exclude Revenue and Expenditure in connection with the Bombay grass supply as well as the expenditure of the General Direction Division.

25 The post of the Chief Conservator was held by Mr. Hart, C. I. E., up to the 4th April 1913, when the writer relieved him on his promotion to the Inspector-Generalship, and held the post till the end of the year. The charge of the Northern Circle was held by the writer till the 2nd May 1913, and for the remainder of year Mr. H. H. Forteach was in charge. Mr. Haines relinquished charge of the Southern Circle on the 10th April 1913, on which date he proceeded on combined leave and was succeeded by Mr. Trafford, who remained in charge of the Circle during the

remainder of the year. Mr. Blunt was in charge of the Berar Circle throughout the year. No Imperial or Provincial Service Officer retired during the year, but Mr. Williamson, Deputy Conservator of Forests, was transferred to Assam to officiate as Conservator of that Province. He has since been granted combined leave with effect from the date of his relief in Assam.

The work of the subordinate staff appears to have been fairly good on the whole and the Chief Conservator is glad to note that several subordinates have been specially mentioned by the Conservator, Northern Circle. The Berar Conservator, however, states that there is great room for improvement, especially among the older subordinates. It is satisfactory to note that there was a further reduction in the percentage of punishments during the year, which was 15 against 18 in 1911-12. The proposals for the re-organization scheme referred to in the last year's review were returned by the Government for revision during the year and were re-submitted after the close of the year in so far as they relate to Forest Rangers and Forest Guards. All the Conservators have again brought to notice the inadequacy of the pay of the clerks in the lower grades and this matter is shortly to be enquired into.

The year was on the whole a healthy one, the mortality among the staff being 26 guards, one orderly and one Range clerk.

During the year the Narsinghpur Division was amalgamated with the Jubbulpore Division, and with the transfer of the Dhanwahi Range from Jubbulpore the Mandla Division was divided into two Divisions, North and South Mandla. These changes came into force with effect from the 1st April 1913. This re-distribution of areas should result in more efficient management.

26. *Forest Villages.*—Only 13 new forest villages were finally settled during the year against 89 in the previous year. In addition 7 forest villages were started in the Northern Circle, while in the Balaghat Division of the Southern Circle 21 yotwari villages were taken over by the Forest Department, the compensation paid being Rs. 5,827. In the same Circle 8 villages were acquired by exchange. As regards the forest villages in the Melghat the Conservator, Berar Circle, remarks that a very large part of the population of that tract are in a state of uncertainty as to their real wishes and intended movements. He observes that as the Forest Department depends entirely on the Korku population for the exploitation of forest produce, the early completion of the working-plan of the Melghat Division to lessen the restrictions necessarily imposed in the new reserves and to regularize their working is very necessary. The Chief Conservator trusts that the work will be expedited as much as possible.

Shooting Permits.—In all 748 shooting permits were issued during the year against 759 in the preceding year.

To give effect to the Government orders regarding the destruction of pig and nilgai 62 special permits were issued in the Akola Division of the Berar Circle and 111 pig and 99 nilgai were killed in that district. It is stated by the Conservator that a large number of licenses issued in the vicinity of Amraoti are used for the purpose of trade in meat and hides of game and to check this abuse and to prevent the total extinction of all game in this locality he suggests that the number of permits must be restricted in future.

The Agricultural Department continued the operations to catch the wild cattle in the Bhongayon Reserve, but they succeeded in capturing only 4 animals. The Conservator considers that the assistance of Phansi Pardhis should be obtained.

The relations between Forest and Revenue Officers were generally most satisfactory and several Deputy Commissioners have recorded appreciative remarks on the services of Divisional Forest Officers. There appears to have been some slight friction in Balaghat, but matters now appear to have been satisfactorily settled.

In the Melghat there was some antagonism between the subordinate revenue officials and the Forest Department. The Commissioner, Berar, however has taken action in the matter and it is hoped that the arrangements he has made will prevent any further difficulties. He has expressed some dissatisfaction at the manner in which the orders of the Administration in regard to the introduction of restrictions and other measures in the Melghat have been carried out. The Chief Conservator will enquire into the matter during the touring season.

PACHMARHI,
Dated the 26th November 1913. }

M. HILL,
Chief Conservator of Forests,
Central Provinces.

ANNUAL FORM NO. 7.—[PRESCRIBED].—Area of Reserved and Unclassed State Forest and Waste Lands during the year 1912-13

Division	Range	Civil District or Territory.	Name of Forest.	Area on 1st July 1912.		Added during the year.	Excluded or transferred to other heads	Area on 30th June 1913		No. and date of Notification of addition or transfer, etc.	Remarks.	
				Acres	Equivalent in square miles.			Acres	Acres.			Acres	Equivalent in square miles.
1	2	3	4	5	6	7	8	9	10	11	12	
NORTHHERN CIRCLE	Mandla (as it stood prior to 1st April 1913).	Jagmandal.	Mandla	RESERVED FORESTS								Correction of area in accordance with the figures of Forest surveys. Excluded being part of Samaria malguzari. Out of 22 acres an area of 19 acres excluded which was omitted last year and 3 acres which was wrongly added last year.
				A Class								
				Chabi Block No 51	2,775	4	5	-	2,280	4		
				" " 52A	809	1		5	884	1		
				Lurha " 56	968			968				
				Motinala Do. Beljani " 60	29,564	46	-	23	29,542	46		
				Remainder of A Class	1,098,034	1,716	-		1,098,034	1,716		
				Total A Class	1,131,739	1,768	5	995	1,130,740	1,767		
				B-I Class.								
				Total B-I Class	513,824	801			513,824	801		
				Total for Division	1,645,564	2,571	5	995	1,644,564	2,570		
				Jubbulpore and Narsinghpur (as they stood prior to 1st April 1914)	Dhanwahi.	Mandla	Bamni Block No 49	739	1	20	-		759	1		Area over looked by the Survey Party: hence included in the Reserve.
Remainder of A Class	3,14,438	518					-	331,438	518			
Jubbulpore Total A Class.	332,164	519	20				-	332,184	519			
Narsinghpur Total A Class.	159,398	249	-				-	159,398	249			
Total for Jubbulpore and Narsinghpur Divisions.	491,566	768	20				-	491,576	768			
A Class.												
A Class												
Dawah ..	South-Western.	Dargoh	Hanmathago Block No 64				10,764	17		60	10,704	17	Notification No. 649, dated the 30th August 1912	Disforested.
			Gopalpura " 65	718	1	-	20	698	1			
			Bajwa " 67	9,943	16	80	-	10,023	16	Notification No. 650, dated the 30th August 1912	Afforested.	
			Remainder of A Class	485,318	758	-		485,318	758			
			Total A class	506,743	791	80	80	506,743	791			
			Total for Division	506,743	791	80	80	506,743	791			

ANNUAL FORM NO. 7—[PRESCRIBED].—Area of Reserved and Unclassed State Forest and Waste Lands during the year 1912-13.—(Contd.)

Division	Range.	Civil District or Territory	Name of Forest	Area on 1st July 1912		Added during the year.	Excluded or transferred to other heads	Area on 30th June 1913		No. and date of Notification of addition or transfer, etc	Remarks
				Acres	Equivalent in square miles	Acres	Acres	Acres	Equivalent in square miles		
1	2	3	4	5	6	7	8	9	10	11	12
NORTH-CENTRAL CIRCLE—(Contd.)	Saugor	Banda	Saugor	RESERVED FORESTS							
				A—Ghat							
				Sigdoni, Block No 102	167		67			Notification No 432 dated the 29th July 1912	
				Chauki " 112	355	1	3 12	351'88		Notification No. 880, dated the 24th October 1912	
				Dulchpur " 122	22,075	35	13'46	31 46	22,057	Notification No 421, dated the 26th June 1912.	
										Notification No 422 dated the 26th June 1912	
				Khural Do. Bandri, East " 98	3,567	6	82	1'86	3,565 96	Notification No. 422, dated the 4th July 1912.	
										Notification No 423, dated the 4th July 1912.	
				Bandri, West " 97	3,228	6	25 30	3,224'70		Notification No 424, dated the 4th July 1912.	
							2 86	17 97		Notification No 425, dated the 4th July 1912.	
	Rehli	Do	Mohli	Barodias " 89	5,375	5	9 10	1'76	5,366'60	Notification No 426, dated the 4th July 1912.	
							3 89	2 52		Notification No 427, dated the 4th July 1912.	
										Notification No 428, dated the 4th July 1912.	
										Notification No 429, dated the 4th July 1912.	
										Notification No 430, dated the 4th July 1912.	
										Notification No 431, dated the 4th July 1912.	
										Notification No 432, dated the 4th July 1912.	
										Notification No 433, dated the 4th July 1912.	
										Notification No 434, dated the 4th July 1912.	
										Notification No 435, dated the 4th July 1912.	
	Rehli	Do	Mohli							Notification No 436, dated the 4th July 1912.	
										Notification No 437, dated the 4th July 1912.	
										Notification No 438, dated the 4th July 1912.	
										Notification No 439, dated the 4th July 1912.	
										Notification No 440, dated the 4th July 1912.	
										Notification No 441, dated the 4th July 1912.	
										Notification No 442, dated the 4th July 1912.	
										Notification No 443, dated the 4th July 1912.	
										Notification No 444, dated the 4th July 1912.	
										Notification No 445, dated the 4th July 1912.	
										Notification No 446, dated the 4th July 1912.	
	Rehli	Do	Mohli							Notification No 447, dated the 4th July 1912.	
										Notification No 448, dated the 4th July 1912.	
										Notification No 449, dated the 4th July 1912.	
										Notification No 450, dated the 4th July 1912.	
										Notification No 451, dated the 4th July 1912.	
										Notification No 452, dated the 4th July 1912.	
										Notification No 453, dated the 4th July 1912.	
										Notification No 454, dated the 4th July 1912.	
										Notification No 455, dated the 4th July 1912.	
										Notification No 456, dated the 4th July 1912.	
										Notification No 457, dated the 4th July 1912.	

* Excluded due to correction of area.

ANNUAL FORM NO. 7.—[PRESCRIBED].—Area of Reserved and Unclassed State Forests and
Lands during the year 1912-13.—(Contd.).

Division.	Range.	Civil District or Territory	Name of Forest.	Area on 1st July 1912		Added during the year	Excluded of transferred to other heads	Area on 30th June 1913		No. and date of Notification of addition or transfer, etc.	Remarks.
				Acres	Equivalent in square miles.			Acres	Equivalent in square miles.		
1	2	3	4	5	6	7	8	9	10	11	12
NORTHERN CIRCLE— (Contd.)	Saugor	Saugor	RESERVED FORESTS.								
			A. O. 111.								
			Bishampur, Block 41	418	1	3 20	6 70	414 50		1 Notification No. 841, dated the 16th October 1912	
			Jaisinghnagar East, Block No. 44	1,104	2	15 03	42 82	1,076 21		2 Notification No. 841, dated the 16th October 1912.	
			Gondal, " 45	222		16	24	221 92		Notification No. 842, dated the 16th October 1912	
			Keslon, " 47	925	2	0 15	10 03	924 12		3 Notification No. 841, dated the 16th October 1912	
			Barkheri, " 48	163			50	162 70		Notification No. 842, dated the 16th October 1912.	
			Jaisinghnagar West, Block No. 50	1,676	3	14 20	33	1,689 87		3 Notification No. 841, dated the 16th October 1912	
			Ranipura, " 59	840	1	3 33	2 78	839 54		1 Notification No. 454, dated the 4th July 1912.	
			Amakhuri, " 63	880	1		13	862		1 Notification No. 184, dated the 17th February 1913.	
			Bahadarpur, " 75	7,817	12	6 24	10 24	78 13		12 Notification No. 416, dated the 21st June 1912	
										Notification No. 417, dated the 21st June 1912.	
										Notification No. 423, dated the 24th June 1912.	
			Rahatgarh, " 76	5,505	9	19	1 464	5,494 90		8 Notification No. 424, dated the 24th June 1912	* Correction of area in accordance with the figures of Forest surveys
										Notification No. 425, dated the 20th July 1912.	† Separated and formed into a separate block owing to the disforestation of an area of 72 acres.
										Notification No. 426, dated the 10th July 1912.	
			" " 76A			464		464		1	New block as per above remarks.
	Deor	Do,	Benswarh, " 3	6,467	10		47 60	6,419 10		10 Notification No. 2960, dated the 6th September 1912.	This area though disforested in 1896 was not included in the form at the time.

ANNUAL FORM NO. 7.—[PRESCRIBED].—Area of Reserved and Unreserved Lands during the year 1912-13.—(Contd.).

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1912.		Added during the year.	Excluded or transferred to other heads.	Area on 30th June 1913.		No. and date of Notification of addition or transfer, etc.	Remarks.
				Acres.	Equivalent in square miles.			Acres.	Equivalent in square miles.		
1	2	3	4	5	6	7	8	9	10	11	12
NORTH-CENTRAL CIRCLE.—(Contd.)	Saugor	Deori	Saugor	RESERVED FORESTS							
				A Class.							
				Hathkoti Block No. 27	3,607	14	21'26	8,585 74	14	Notification No. 926, dated the 10th November 1912.	
				Naharnian " 36	3,238	5	37	3,237 63	5	Notification No. 880, dated the 24th October 1912.	
				Remainder of A Class	321,705	505	..	323,705	504		
				Total A Class	482,318	754	739 01	1,319 30	481,738	753	
				Total for Division	482,318	754	739 01	1,319 30	481,738	753	
	Hoshangabad.	..	Hoshangabad.	A Class.							
				Total A Class	601,157	939	..	601,157	939		
				Total for Division	601,157	939	..	601,157	939		
Seron	Chhapara..	Seron	Bijna, Block No. 11	A Class.							
				27,561	43	..	17	27,544	43	Notification No. 4974, dated the 8th September 1902.	Excluded which was omitted before.
	Dhuma	Do	Dargah North " 1-Q	1,161	2	..	41	1,120	2		Excluded: due to correction of boundary line.
				192	..	7	18	181	..		Do do.
	Nerbudda	Do	Ghurwara " 1-J	491,603	768	..	..	491,598	768		
				Remainder of A Class	491,603	768	..	..	491,598	768	
				Total A Class	520,417	813	7	520,348	813		
				Total for Division	520,417	813	7	520,348	813		
	Chhindwara	Sulewangaht.	Chhindwara	A Class.							
				Khadbeh, Block No. 106	61,488	95	..	204	61,478	95	Notification No. 1107, dated the 18th December 1912.
Chhindwara	Sulewangaht.	Chhindwara	Markasur " 109	1,652	3	(a) 11	(b) 9	1,654	3	(a) Notification No. 395, dated the 11th June 1912.	Disforested. To improve the forest boundary.
				Remainder of A Class	363,072	568	..	..	363,072	568	(b) Notification No. 395, dated the 11th June 1912.
				Total A Class	426,306	666	11	426,304	666		
	Chhindwara	Chhindwara	Total B-I Class	32,853	51	..	..	32,853	51		
				Total for Division	429,059	717	11	428,867	717		
	Chhindwara	Chhindwara	Reserved Forest, A Class.	4,700,117	6,500	862	2,683	4,758,306	6,498		
				Reserved Forest, B-I Class.	546,677	854	..	546,677	854		
				Total for Northern Circle.	4,706,804	7,354	862	4,704,983	7,352		
	Chhindwara	Chhindwara	Total B-I Class	32,853	51	..	..	32,853	51		
				Total for Division	429,059	717	11	428,867	717		
	Chhindwara	Chhindwara	Reserved Forest, A Class.	4,700,117	6,500	862	2,683	4,758,306	6,498		
				Reserved Forest, B-I Class.	546,677	854	..	546,677	854		
				Total for Northern Circle.	4,706,804	7,354	862	4,704,983	7,352		

Lands during the year 1912-13 — (Contd.).

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1912.		Added during the year.	Excluded or transferred to other heads.	Area on 30th June 1913.		No. and date of Notification of addition or transfer, etc.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.		
1	2	3	4	5	6	7	8	9	10	11	12
SOUTHERN CIRCLE.—(Contd.)											
North Chanda.	Warora.	Chanda.	RESERVED FORESTS								
			B Class.								
			Warora	9,184	15	...	5,095 3,074	415		1	Notification No. 967, dated the 19th November 1912 and No. 429, dated the 1st May 1913.
			Moharli	13,841	22	..	150 1,253	12,138		19	Notification No. 967, dated the 19th November 1912, and No. 422, dated the 9th June 1913.
			Havli	31,119	52	...	3,116 1,810	28,493		44	Do Do.
			Brahmapuri.	24,973	38	...	550 1,510	22,913		35	Notification No. 967, dated the 19th November 1912, and No. 428, dated the 1st May 1913.
			Gunjewahi.	25,179	39	...	219 194	24,166		37	Notification No. 967, dated the 19th November 1912 and No. 422, dated the 9th June 1913.
			Remainder	99,211	155	...	...	99,211	155		
			Total B Class	205,507	321	..	18,471	187,036	292		
			Total for Division	915,241	1,430	788	18,471	807,558	1,402		
South Chanda.	Ghot.	Chanda.	A Class.								
			Ghot	94,014	147	228	...	94,242		147	Notification No. 55, dated the 15th January 1913.
			Markhanda.	144,764	226	*3,481	14,531	143,714		225	Notification No. 55, dated the 15th January 1913.
			Sironcha.	189,731	296	(a) 6,497 (b) 1,619	...	196,547		307	Notification No. 55, dated the 15th January 1913.
			Remainder	179,953	281	...	...	179,953	281		(a) Secretariat No. 673—XIV-5-36, dated the 26th August 1912. (b) Notification No. 465, dated the 19th May 1913.
			Total A Class	607,862	950	11,225	4,531	614,556	950		
	Do.	Markhanda.	B Class.								
			Markhanda	38,473	60	615	...	39,088		61	Notification No. 55, dated the 15th January 1913.
			Dhaba	21,443	37	...	7,741	15,688		25	Notification No. 266, dated the 19th July 1912.
			Sironcha	42,488	66	...	6,497	35,991		56	Secretariat No. 673—XIV-5-36, dated the 26th August 1912.
			Remainder	122,379	191	...	...	122,379	191		
			Total B Class	226,773	354	615	14,943	213,146	333		
			Total for Division	834,635	1,304	11,840	18,773	827,702	1,293		
	Nagpur-Wardha.	Wardha.	A Class.								
			Dhanapur	4,347	7	...	2	4,345	7		
			Remainder	453,615	709	...	...	453,615	709		
			Total for Division	457,962	716	...	2	457,960	716		
			B Class.								
			Wardha	4,347	7	...	2	4,345	7		
			Remainder	453,615	709	...	...	453,615	709		
			Total for Division	457,962	716	...	2	457,960	716		
			A Class.								
			Wardha	4,347	7	...	2	4,345	7		
			Remainder	453,615	709	...	...	453,615	709		
			Total for Division	457,962	716	...	2	457,960	716		

Disforested for cultivation.

Simplification of boundary with Ahir Estate.

Correction of are

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1912.		Added during the year.	Excluded or transferred to other heads.	Area on 30th June 1913.		No. and date of Notification of addition or transfer, &c.	Remarks.
				Acres.	Equivalent in square miles.			Acres.	Equivalent in square miles.		
1	2	3	4	5	6	7	8	9	10	11	12
SOUTHERN CIRCLE.											
Balaghat ..	Sonawani...	Balaghat ..	Lohagni ..	249	...	...	249	...	...	Notification No. 88, dated the 24th October 1912.	Disforested for cultivation.
			Sonawani ..	61,040	96	30	...	61,040	96	Notification No. 17, dated the 4th January 1913.	Afforested to include site of tank and rest-house.
	Dhansua ..	..	Nazul Forest ..	...	...	1,236	...	1,236	2	Notification No. 200, dated the 18th March 1913.	Afforested for preservation of forest.
			Khalondi ..	21,124	33	...	38	21,126	33	Notification No. 85, dated the 21st January 1913.	To effect change.
	Baihar ...	...	Sarekha ..	47,478	74	57	...	47,535	74	Notification No. 8, dated the 21st January 1913.	
			Remainder ..	493,686	771	...	...	493,686	771		
			Total for Division ..	622,607	974	1,323	307	6,44,623	976		
	Bhandara ..	Bhandara..	Pannara ..	405	1	...	405	...	...	Notification No. 302, dated the 11th June 1912.	Do.
			Kumargaon ..	1,416	2	438	...	1,854	3	Notification No. 308, dated the 11th June 1912.	
	Galkhuri ..	..	Umrheri ..	29,001	45	78	181	28,998	45	Notification Nos. 488 and 249, dated the 17th July 1912.	Correction of area.
Bhandara ..	Bhandara...	Bhandara...	Buki Mendki ..	2,884	4	...	13	2,869	5	Notification No. 490, dated the 17th July 1912.	Do.
			Nawegaon ..	12,496	20	...	267	12,329	20	Notification No. 490, dated the 17th July 1912.	
			Gumgaon Pipalgaon...	22,537	35	68	...	22,605	35	Notification No. 490, dated the 17th July 1912.	
			Remainder ..	266,901	416	...	...	266,901	416		
			Total A Class ..	305,640	524	584	768	335,456	524		
			Total B Class ..	5,479	9	...	...	5,479	9		
Do. ...	Do. ...	Do. ...	Total for Division ..	341,119	533	584	768	340,935	533		
Bilaspur ..	East Lornai.	Bilaspur...	Kori ..	6,524	10	18	714	6,528	20	Notification No. 437, dated the 6th May 1913.	To rectify boundaries in accordance with settlement records.
			Devsara ..	30,024	47	21	73	30,022	47	Notification No. 438, dated the 6th May 1913.	
	West Lornai.	..	Salangi ..	33,883	53	...	71	33,882	53		
			Gatwa ..	481	1	...	5	476	1	Notification No. 242, dated the 3rd March 1913.	
	Kunjati Pantora.	..	Remainder ..	354,207	554	...	...	354,207	554		
			Total for Division ..	425,209	665	19	23	425,205	665		
North-Chanda.	Gunjewahi.	Chanda ...	Gunjewahi ..	115,108	180	610 60 118	...	115,806	181	Notification Nos. 525, 526 and 527, dated the 10th June 1913.	Reafforested to include area under irrigation Department.
			Remainder ..	594,626	929	...	...	594,626	929		
			Total A Class ..	709,734	1,109	788	...	710,522	1,110		

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1912		Added during the year.	Excluded or transferred to other head.	Area on 30th June 1913		No. and date of Notification of addition or transfer, etc.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.		
1	2	3	4	5	6	7	8	9	10	11	12
RESERVED FORESTS.											
A Class.											
Raipur ..	Sihawa, North.	Raipur ..	Sihawa, North	148,177	232	...	1,604	147,173	230	Notification No. 722 dated the 3rd September 1912	To effect exchange.
	Sihawa, South.	"	Sihawa South	159,301	250	1,604	...	161,465	253	Notification No. 723, dated the 3rd September 1912	
			Remainder	571,603	898	...	...	574,603	898		
			Total for Division	883,211	1,380	1,604	1,604	883,241	1,380		
			Reserved Forest, A Class.	4,043,255	6,318	15,543	7,235	4,051,563	6,331		
			Reserved Forests, B Class	437,759	684	615	32,713	4,05,661	634		
			TOTAL SOUTH P & CIRCLE	4,181,014	7,002	16,158	39,948	4,457,224	6,965		
RESERVED FORESTS UNDER THE IRRIGATION DEPARTMENT											
A Class.											
Balaghat ...	Sonawani.	Balaghat ...	Sonawani	86	...	159	...	...	...	Notification No. 1002, dated the 1st December 1912.	Transferred from charge of Forest Department for the following works:- Kataugheri tank.
						122	...	747	...	Notification No. 1003, dated the 11th December 1912.	Chapanala "
						623	...	...	...	Notification No. 62, dated the 16th January 1913.	Jamunia "
						380	...	...	...	Notification No. 197, dated the 18th February 1913.	Sarati Nala "
	Bahar ...		Sarekha	34	...	34	...	58	...	Notification No. 47, dated the 15th January 1913.	Kutri Nala "
			Bhanrapahar	...	...	22	...	22	...	Notification No. 1001, dated the 28th November 1912	Jagla "
			Remainder	100	...	...	...	100	...		
			Total for Division	220	...	707	...	927	...		
A Class.											
Bhandara ...		Bhandara ..		637	1	...	...	637	1		
			Total for Division	637	1	...	...	637	1		
A Class.											
North-Chanda.	Mohari ..	Chanda ...	Mohari	2,066	3	6	...	2,072	3	...	Naleswar Tank.
	Haveli ..	...	Haveli	1	...	66	...	67	...	...	Itoli "
	Brahmapuri.	...	Brahmapuri	4,794	8	8	...	4,803	8	...	Ghorajheri "
	Gunjewahi.	...	Gunjewahi	2,328	4	788	...	3,116	5	...	Asola Mendha "
			Total A Class	9,189	15	868	...	10,057	16		
B Class.											
North-Chanda.	Mohari ..	Chanda ..		2	...	...	...	2	...		
			Total B Class	2	...	...	...	2	...		
			Total for Division	9,191	15	868	...	10,059	16		

Lands during the year 1912-13 (not under the management of the Forest Department)

Division,	Taluk	District	Name of Forest	Area in July		Added in 1912-13	Excluded from the total	Area on 31st June 1913		No. and date of Notification of addition or transfer, &c.	Remarks	
				Acres	sq. miles			Acres	sq. miles			
1	2	3	4	5	6	7	8	9	10	11	12	
SOUTH- ERN CIR (L.) (Central)	South Chanda	Dhaba	Chanda	RESERVED FORESTS UNDER THE IRRIGATION DEPARTMENT								
				B Class.								
					13					13		
				Total for Division	13					13		
	Raipur	Baleid	Drug		586	1			586	1		
				Total for Division	586	1			586	1		
				Total under the Irrigation Department.								
				A Class	10,612	27	15	5	12,207	19		
				B Class	15				15			
				Grand Total	10,647	27	1,575		12,222	19		
RESERVED FORESTS UNDER THE PUBLIC WORKS DEPARTMENT.												
Bhandara	Bhandara	Bhandara		81				81				
			Total for Division	81				81				
			A Class.									
North Chanda.	Haveli Moharli	Chanda	Haveli	40		77		117				
			Moharli			15		15				
			Total for Division	40		92		132				
			A Class.									
South Chanda.		Chanda		151				151				
			Total A Class	151				151				
Do.		Chanda		187				187				
			Total B Class	187				187				
			Total for Division	338				338				
			A Class.									
Nagpur Wardha.		Nagpur and Wardha.		132				132				
			Total for Division	132				132				
			Total under the Public Works Department.									
			A Class	404	2	92		496	1			
B Class	187				187							
Grand Total	591	2	92		683	2						

For quarrying purposes.

For quarrying purposes.

Lands during the year 1912-13 (not under the management of the Forest Department). (continued)

Division	Range	Class of District or Taluk	Name of Forest	As on 1st Jul 1911		Added during the year		As on 30th June 1912		No. and date of Notification of addition or subtraction, &c.	Remarks
				Acres	Equivalent in square miles	Acres	Acres	Acres	Equivalent in square miles		
1	2	3	4	5	6	7	8	9	10	11	12
BURAR CIRCLE						REMOVED FOR SE CLASS					
Melghat		Amroli	All Forest	112,972	1,161			12,100	1,161		
			Various Babul Pan	1,121	11	654		1,745	11	No. 187 and 190, dated the 17th February 1912.	Transferred from "C".
Amraoti		Do	All other Forests	27,341	45			10,711	45		
			Total	141,434	57	654		37,560	59		
Buldana		Buldana	6th Division, North	5,500	87	0		5,590	87	No. 366, dated the 17th April 1911.	Afforested.
			All other Forest	1,643	150			1,643	150		
			Total	7,143	99	70		7,233	200		
			Conjugal	1,109			20	1,129	20	No. 148, dated the 17th May 1912.	Correction of area.
Yestmal		Yestmal	Dhara	6,500	11	59		6,590	11	No. 37, dated the 9th April 1913.	Afforested.
			Gangannal	8,700	14	27		8,727	14	No. 372, dated the 9th April 1913.	
			All other Forests	107,180	490			107,180	490		
			Total	114,280	515	86	20	114,901	535		
			Meda	1,100	11	20		1,120	11	No. 367, dated the 17th April 1911.	Afforested.
			Chikhalwal	11,810	24	6	50	11,866	31	No. 170 dated the 9th April 1913.	
Akola		Akola	Patne	1,105	17	1		1,113	17	No. 371 dated the 9th April 1913.	Disforested.
			Various Babul Pan	1,820	3		2	1,825	3	No. 369, dated the 17th April 1911.	Afforested.
			All other Forests	1,143	97			1,143	97	No. 1091, dated the 11th December 1911.	Disforested.
			Total	4,168	102	27	52	4,298	161		
			Grand Total of Class B in Burar.	1,178,900	2,114	8,38	72	1,199,760	2,145		
						C Class.					
Melghat		Amroli	All Forests	1,592	6			1,592	6		
Amroli		Do	Do	11,583	19			11,583	19		
Buldana		Buldana	Do.	5,510	9			5,510	9		
Yestmal		Yestmal	Do	19,440	30			19,440	30		
Akola		Akola	Do.	13,470	21			13,470	21		
			Grand Total of Class B in Burar.	53,775	84			53,775	84		
Amroli		Amroli	All Forests	113,710	178	{ 6% (a) 8,051 (b) }		104,972	164	(a) Nos. 180 and 190 dated the 17th February 1913. (b) Nos. 185 to 188, dated the 17th February 1913.	Transferred to A. Disforested.
Buldana		Buldana	All Forests	126,661	195	244 (c)	11,026	115,879	181	(c) No. 1143, dated the 17th July 1912. Nos. 643 to 647, dated the 20th August 1912. No. 397, dated the 19th April 1913.	Transferred from Akola Division. Disforested.

[illegible]

or Public Forests, Land and Leased Forests in 1912-13 - (Contd.)

Division	Taluk	Civil District or Taluk	Name of Forest	Area in 1912-13		Area in 1911-12	Total area in 1912-13	Area in 1912-13		No. of acres of land in 1912-13	Remarks
				Acres	1/4 mile	Acres	Acres	Acres	1/4 mile		
1	2	3	4	5	6	7	8	9	10	11	12
Bikaner District - (Contd.)											
Nimaj	Bikaner	Nimaj	Thames	41,000	0	41,200	41,200			No. 11,177 dated 11th July 1912	Transferred to Imperial Range.
			Jholi	3,100	5	4	4				
			Mandi	1,100		17,300	17,300				Transferred to Chandra Range.
			Total Range	105,000	15	11,200	11,200				
			Other Forests	5,000	0			5,000			
			Total Division	110,000	15	11,200	11,200	5,000			
			Other Forests	5,000	0			5,000			
			Total Range	115,000	15	11,200	11,200	5,000			
			Other Forests	5,000	0			5,000			
			Total Range	120,000	15	11,200	11,200	5,000			
Pala	Bikaner	Pala	Kharagondi	27,000	13	2,477	2,477	20	30		
			Lodhricko	2,705	4	1,400	1,400	4	6		
			Puthihera	12,100	19	17	17	12,117	19		Transferred from B.I.
			Tham	889		3	3	211		* Secretariat letter No. 110-XIV dated 11th November 1912	
			Indi	7,000	47	101	101	6,136	17		
			Jam Bichwa	1,100	1	2	2	401	1	No. 101 dated 11th July 1912	Disforested.
			Patali	1,000	3	4	4	1,037	3		
			Dehwar			11	11				
			Other Forests	22,000	35			2,133	34		
			Total Range	90,000	151	1,400	1,400	6,136	119		
Asa	Do.	Do.	Pajji	92,145	1	0	0	82,000	18		
			Dhans	1,000	1	20	20	1,017	2	* Secretariat letter No. 110-XIV dated 11th November 1912	Transferred from B.I.
			Gwari	700	1	0	0	700	1		
			Dhapari	920	1	21	21	797	1		
			Amthani	73,797	115	31	31	7,765	115	No. 101 dated 11th July 1912	Disforested.
			Sahwari	1,000	3	6	6	1,000	3		
			Other Forests	1,000	0			1,000	0		
			Total Range	101,000	115	1,400	1,400	11,000	115		
			Other Forests	1,000	0			1,000	0		
			Total Range	102,000	115	1,400	1,400	12,000	115		
Sironagarh	Do.	Do.	Phopri (North)	1,119	1	41	41	1,159	4	* Secretariat letter No. 110-XIV dated 11th November 1912	Transferred from B.I.
			Gawasin	10,000	31	719	719	20,000	30		
			Chikhli	2,000	3	19	19	1,000	3	No. 101 dated 11th July 1912	Disforested.
			Other Forests	5,000	60			5,000	60		
			Total Range	18,000	138	764	764	26,000	130		
			Other Forests	1,000	0			1,000	0		
			Total Range	19,000	138	764	764	27,000	130		
			Other Forests	1,000	0			1,000	0		
			Total Range	20,000	138	764	764	28,000	130		
			Total Range	21,000	138	764	764	29,000	130		
Pajji	Do.	Do.	Pajji	2,000	40	15	15	2,000	40		
			Mohda	2,000	11	57	57	2,000	41	* Secretariat letter No. 110-XIV dated 11th November 1912	Transferred from B.I.
			Khamapur	20,100	31	19	19	20,451	32		
			Chun	10,000	30	4	4	10,000	30		
			Nulgah	2,000	13	13	13	2,000	13	No. 101 dated 11th July 1912	Disforested.
			Majrwar	11,000	18	11	11	1,000	18		
			Other Forests	50,000	98			6,000	98		
			Total Range	100,000	202	101	101	100,000	202		
			Other Forests	1,000	0			1,000	0		
			Total Range	101,000	202	101	101	101,000	202		
Dabli	Do.	Do.	Piparia	18,000	28	1	1	18,000	28	* Secretariat letter No. 110-XIV dated 11th November 1912	Transferred from B.I.
			Khapalhan	17,000	27	105	105	17,000	27		
			Pala	14,443	15			14,443	15		
			Sitkund	2,000	43			2,000	43		
			Sukhi	800	1			800	1	No. 101 dated 11th July 1912	Disforested.
			Other Forests	1,000	2			1,000	2		
			Total Range	33,000	113	106	106	33,000	113		
			Other Forests	1,000	0			1,000	0		
			Total Range	34,000	113	106	106	34,000	113		
			Total Range	35,000	113	106	106	35,000	113		

ANNUAL FORM NO. 7.—[PRESCRIBED].—Area of Reserved Forests, Protected Forests and Unclassed or Public Forests, Land and Leased Forests in 1912-13 —(Concl'd.)

Division	District or Territory	Civil District or Territory	Name of Forest	Area on 1st July 1911		Addition during the year	Excluded or transferred to other heads	Area on 30th June 1912		No. and date of Notification of addition or transfer, etc.	Remarks.
				Acres	Equivalent in square miles			Acres	Equivalent in square miles		
1	2	3	4	5	6	7	8	9	10	11	12
BEAR CAMP (Concl'd)											
BEAR CAMP (Concl'd)											
Bihar	Sahibganj	Be'at	Sahibganj	20,171	32			16,779	26	† Secretary letter No. 910-XIV-533, dated the 2nd November 1912. † No. 467, dated the 11th July 1912.	Transferred from B-I. Disforested.
			Katipara	9,817	15			9,781	15		
			Dhokra	5,705	9			5,755	9		
			P. coli	23,195	36	6		23,195	36		
			G. coli	8,862	14			8,862	14		
			Other Forests	2,072	3			2,000	3		
			Total Range	70,755	111	6		67,907	105		
			All other Forests	9,173	15			9,173	15		
			Total Division	1,00,261	1,168	2,566		70,919	111		
			Total Forests in N. and B. Div.	1,17,331	1,168	100,218		1,33,191	2,367		
Nimr	All Ranges	Nimr	All Forests	167,969	266		167,969		Nos. 464 and 465, dated the 26th October 1912.	Disforested.	
			Total Division	100,941	166		167,969				
			All Forests	70,919	120	18		4,981			8
Bihar	Do.	Be'at	All Forests	70,919	120	18		4,981	8	Nos. 462 to 467, dated the 11th July 1912. Secretary letter No. 910-XIV-533, dated the 2nd November 1912.	Disforested. Transferred to A Class. (1) Correction of area.
			Total Division	70,919	120	18		4,981	8		
			Total Forests in N. and B. Div.	247,206	350	18		1,091	8		
			Total of all Forests in N. and B. Div.	2,461,211	3,257	100,306		1,80,895	2,875		
			Grand Total of Forests in Bihar	4,26,536	6,782	113,271		4,003,350	6,155		
			GRAND TOTAL OF FORESTS IN BIHAR	13,10,534	21,035	130,291		13,10,534	21,035		

FORM No. 8.

FORM NO. 8.—Statement showing the Progress made in, and the

Name of Forest Division.	Name of Civil District or Territory	Area already settled at commencement of the year	Areas finally settled during the year.					
			No. and date of Government order according final sanction to the settlement.	Name of forest settled	Area in square miles.	Expenditure incurred during the year on areas finally settled.		Lature cost per square mile of area finally settled during the year
						In forest accounts	In other accounts.	
1	2	3	4	5	6	7	8	9
NORTHERN CIRCLE		Sq. ms				Rs	Rs.	Rs.
Mandla (as it stood prior to 1st April 1913)	Mandla	2,570	...	...	..			..
Jubbulpore and Narsinghpur (as they stood prior to 1st April 1913.)	Jubbulpore	345	...	..	...	...	...	...
	Mandla	174	...	..	...	...	...	...
	Narsinghpur	249	...	...	...	...	...	...
Damoh	Damoh	792	Notification No. 649, dated the 20th August 1912.	Salaiya	.. '13	...	...	...
...
Saugor	Saugor	753	Notification No. 423, dated the 26th June 1912.	Rahatgarh	.. '13	...	..	...
			Notification No. 454, dated the 4th July 1912.	Ranipura	.. '005	..	...	...
			Notification No. 416, dated the 21st June 1912.	Bilaspur	.. 010	...	...	...
			Notification No. 425, dated the 26th June 1912.	Parasia	.. '015	...	...	..
			Notification No. 118, dated the 31st January 1913.	Hardua	.. '11	...	...	...

Expenditure incurred on, Forest Settlements during 1912-13.

Areas undergoing settlement.						Remarks.
At commencement of the year.		Taken in hand during the year		Expenditure incurred during the year on areas undergoing settlement.		
Name of tract	Area in square miles.	Name of tract	Area in square miles.	In forest accounts.	In other accounts.	
10	11	12	13	14	15	
				Rs	Rs	
Harratola	'22	Kanchanpur	'04	Notification No. 718, dated the 12th September 1912.
Chatra	'20	Dyrr-Mahgaon	'43	..	..
Simaria	'08	Patha-Deagaon	'30	..	..
Dudhari	'003	Dalka-Sarai	'15	..	..
Anjhar	'006	Rakaria	'80	..	..
Sarangpur	'08	Indra	'45	..	..
Ganwahi	'12	Mohgaon alias Padmi	77	..	..
Kudi	'49	..	..	..	..
Hinota	'43	..	..	..	..
Salaiya	'04	..	..	..	..
Seoni	'35	..	..	..	..
Batondha	'38	..	..	..	..
Mehandwani	'25	..	..	..	..
Barkhera	'03	..	..	..	..
Aherwara	'09	..	..	..	..
Samnapur	'26	..	..	..	..
Salaiya	'13	
Pipra	'03	Sajpani	'42	Notification No. 648, dated the 20th August 1912.
Rahatgarh	'12	Menadhana	'02	Do. No. 879, dated the 24th October 1912.
Rampura	'005	Mohandra	'03	Do. No. 882, do.
Bilaspur	'010	Nankpur	'09	Do. No. 917, dated the 2nd November 1912.
Parsia	'015	Lohra	'04	Do. No. 1000, dated the 26th November 1912.
Hardva	'11	Binnai	'34	Do. No. 1, dated the 2nd January 1913.

FORM NO. 8.—Statement showing the Progress made in, and the

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year	Areas finally settled during the year.					
			No. and date of Government order according final sanction to the settlement.	Name of forest settled.	Area in square miles.	Expenditure incurred during the year on areas finally settled.		Entire cost per square mile of area finally settled during the year.
						In forest accounts.	In other accounts.	
1	2	3	4	5	6	7	8	9
NORTHERN CIRCLE— (Contd.) Saugor—(Contd.)		Sq. ms.				Rs.	Rs.	Rs.
			Notification No. 427, dated the 26th June 1912.	Garh Simaria	.. '004	...	...	...
			Notification No. 528, dated the 20th July 1912.	Shikarpur	... '011	...	...	...
			Notification No. 841, dated the 16th October 1912.	Jaisinghnagar	... '06	...	...	...
			Notification No. 452, dated the 4th July 1912.	Netua	... 001	...	...	..
			Notification No. 561, dated the 2nd August 1912.	Tanda	.. '006	..	...	...
			Notification No. 932, dated the 2nd November 1912.	Marpani	... '02	...	...	..
			Notification No. 950, dated the 14th November 1912.	Khera	... '014	...	...	...
			Notification No. 951, dated the 14th November 1912.	Marawan Paik	... '006	...	...	...
			Notification No. 940, dated the 14th November 1912.	Baroda Kalan	.. '004	...	...	...
		Notification No. 421, dated the 26th June 1912.	Simaria Khurd	... '02	...	...	...

Expenditure incurred on, Forest Settlements during 1912-13.—(Contd.)

Areas undergoing settlement.						Remarks.
At commencement of the year.		Taken in hand during the year.		Expenditure incurred during the year on areas undergoing settlement.		
Name of tract.	Area in square miles.	Name of tract.	Area in square miles.	In forest accounts.	In other accounts.	
10	11	12	13	14	15	16
				Rs.	Rs.	
Garh Simaria ...	'004	Barethi ...	15	..	...	Notification No. 110, dated the 29th January 1913.
Hikampur ..	'011	Malthon ...	'72	.	...	Do. No. 220, dated the 26th February 1913.
Jaisinghnagar ...	'06	Mohandra ...	'005	...	...	Do. No. 444, dated the 12th May 1913.
Netna ..	'001	Mirwasa ...	'01	...	...	Do. No. 518, dated the 7th June 1913.
Tanda ..	'006	Khotala ...	'008	...	..	Do. No. 530, dated the 10th June 1913.
Marpani ...	'02	Nipania ...	'02	...	...	Do. No. 532, do.
Khera ...	'014	Piprai ...	'002	...	...	Do. No. 533, do
Marawan Paik ..	'006	Bamhori ...	'01	...	...	Do. No. 534, dated the 11th June 1913.
Barodia Kalan ...	'004	Sukalipur ...	'01	...	...	Do. No. 581, dated the 24th June 1913.
Simaria Khurd ...	'02	Sipur ...	03	...	...	Do. No. 582, do.
...	...	Baghonia ...	'06	...	...	Do. No. 583, do.
...	...	Majhera ...	'04	...	..	Do. No. 584, do.
...	...	Chanari ...	'04	...	...	Do. No. 585, do.
...	...	Dhaura ...	'01	...	..	Do. No. 586, do.
...	...	Chak Mundri ...	'007	...	...	Do. No. 587, do.
...	...	Negawan ...	'03	...	...	Do. No. 588, do.
...	...	Kalwa ...	'16	...	...	Do. No. 589, do.
...	...	Nimni ...	'12	...	...	Do. No. 590, do.
...	...	Chak Chordhawai ...	'09	...	...	Do. No. 591, do.
...	...	Mandni ...	'02	...	...	Do. No. 592, do.

FORM NO. 8.—Statement showing the Progress made in, and

Name of Forest Division	Name of Civil District or Territory	Area already settled at commencement of the year	Areas finally settled during the year.					
			Number and date of Government order according to final sanction to the settlement	Name of forest settled	Area in square miles	Expenditure incurred during the year on areas finally settled		Entire cost per square mile of area finally settled during the year.
						In forest accounts	In other accounts	
1	2	3	4	5	6	7	8	9
		Sq. mls.				Rs.	Rs.	Rs.
NORTHERN CIRCLE—(Contd.)								
Hoshangabad	Hoshangabad	939	"	"	"	...	"	...
Seoni	Seoni	813	"	"	...	...	"	...
Chhindwara	Chhindwara	717	Notification No 206, dated the 11th June 1912	Barraghat	0 01	...	"	"
	Total	7 352		...	0 546			"
SOUTHERN CIRCLE								
Balaghat	Balaghat	974	Notification No 290, dated the 18th March 1913	Balaghat Nazul	1 93	...	"	...
			Notification No 84 dated the 21st January 1913	Korja	0 09	...	...	...
			Notification No 17, dated the 4th January 1913	Sonawani	0 05	...	"	"
					2 07			
Bhandara	Bhandara	533	Notification No 398 dated the 11th June 1912	Bandarewa	0 68	...	...	"
					0 68			
Bilaspur	Bilaspur and Raipur (part)	665	Notification No 437 dated the 6th May 1913	Sheotara Karpiha Darwara	0 03	...	...	"
					0 03			
North Chanda	Chanda	1,430	"	...	...	...	...	...

the Expenditure incurred on, Forest Settlements during 1912-13.—(Contd.)

Areas undergoing settlement						Remarks.
At commencement of the year		Taken in hand during the year		Expenditure incurred during the year on areas undergoing settlement		
Name of tract	Area in square miles	Name of tract	Area in square miles	In forest accounts	In other accounts	
10	11	12	13	14	15	16
				Rs	Rs	
Lotia ..	24			..		
		Chhatarpur and Kotopuria	28	.	.	Notification No 109, dated the 29th January 1913.
Barrighati	101	Pardhanghogni	26	.	.	} Do No 150, dated the 6th February 1913
		Gujarghat	68			
	3 845		6 142			
Balaghat Narul ...	1 93	Maldhar ...	0 64	..	...	Notification No. 219, dated the 26th February 1913, under Section 4 of the Indian Forest Act.
Korja	0 09	Sondhar ...	2 34	..	...	Notification No. 528, dated the 10th June 1913 under Section 4 of the Indian Forest Act
Sonawani ...	0 05		...	...	...
	2 07		2 98			
...	.	Bandanewi ..	0 68	...	.	Notification No. 639, dated the 15th July 1911, under Section 4 of the Indian Forest Act.
			0 68			
Sheotaru, Karpur Darwaza.	0 03	Rampur, Bandha	0 01	...	.	Notification No. 491, dated the 28th May 1913, under Section 4 of the Indian Forest Act
	0 03		0 01			
Khutunda 32 acres	0 05	.	..	...	...
	0 05					

FORM No. 8.—Statement showing the Progress made in, and

Name of Forest Division	Name of Civil District or Territory	Area already settled at commencement of the year	Areas finally settled during the year.					
			Number and date of Government order according to final sanction to the settlement	Name of forest settled.	Area in square miles	Expenditure incurred during the year on areas finally settled.		Entire cost per square mile of area finally settled during the year.
						In forest accounts.	In other accounts.	
1	2	3	4	5	6	7	8	9
SOUTHERN CIRCLE.—(Contd.)		Sq. ms.				Rs.	Rs.	Rs.
South Chanda	Chanda	1,304	Notification No. 55, dated the 15th January 1913	Sidapur Gularghat Pipri Bimhani Jakaipali Wakri Pidigundam Rith Khetni Machli Machligutta Nagalwahi Nakwara (part) Part Yelor Modampalli Rith Gongarpar Rith Khargaoon Rith Rangewahi	0 50 0 46 0 40 0 43 0 37 0 76 0 27 0 24 0 59 1 49 0 08 0 01 0 43 0 51 0 34 0 28	..	..	..
			Notification No. 465, dated the 19th May 1913.	Pataguram Raiguan Pendlaya	0 65 0 48 0 46	..	..	..
					8 35			
Nagpur Wardha	Nagpur Wardha	532 184	..	..	..	..	..	..
Raipur	Raipur	1,206	Notification No. 723, dated the 3rd September 1912.	Risghon and Karhai	2 51	..	..	..
	Drug	174	..	..	2 51	..	..	..
Total Southern Circle		7,002	..	..	13 64	..	..	..
BERAR CIRCLE.								
Melghat	Amraoti	1,167	..	..	..	..	..	..
Amraoti	Do.	258	..	..	..	..	..	..
Buldana	Buldana	445	Notification No. 396, dated the 19th April 1913.	A Class	0 11	..	..	..
Yectmal	Yectmal	1,217	Notifications Nos. 372 and 373, dated the 9th April 1913.	A Class	0 13	..	..	..
Akola	Akola	342	Notifications Nos. 367 to 370, dated the 9th April 1913.	A Class C Class	0 06 0 02	..	..	..
Nimar	Nimar	1,949	..	..	..	..	..	..
Betul	Betul	1,308	..	..	..	..	..	..
Total Berar Circle		6,582	..	..	0 32	..	..	..
GRAND TOTAL FOR CENTRAL PROVINCES AND BERAR		21,038	..	..	14 506	..	..	..

the Expenditure incurred on, Forest Settlements during 1912-13.—(Concl'd.)

Areas undergoing settlement.						Remarks
At commencement of the year		Taken in hand during the year.		Expenditure incurred during the year on areas undergoing settlement.		
Name of tract.	Area in square miles.	Name of tract	Area in square miles.	In forest account.	In other accounts.	
10	11	12	13	14	15	16
				Rs.	Rs.	
Sidapur	0 50	..	..	..	..
Gularghata	0 46	..	..	..	..
Pipri	0 40	..	..	..	..
Bamhni	0 43	..	..	..	..
Jakaipali	0 37	..	..	..	..
Wakri	0 36	..	..	..	..
Pidigundam Rith	0 27	..	..	..	..
Khetni	0 24	..	..	..	..
Machli	0 59	..	..	..	..
Machligutta	..	..	..	..	..
Nagalwahi	1 49	..	..	..	..
Nakwara (part)	0 08	..	..	..	..
Part Yelor	0 01	..	..	..	..
Modampalli Rith	0 43	..	..	..	..
Gongarpar Rith	0 51	..	..	..	..
Khargaon Rith	0 34	..	..	..	..
Rangewahi	0 28	..	..	..	..
..	..	Pataguram	0 65	..	..	Notification No. 668, dated the 23rd August 1912, under Section 4 of the Indian Forest Act.
..	..	Raiguran	0 48	..	..
..	..	Pendlaya	0 46	..	..
	6 76		1 59			
Kotwalbardi	0 01	Faoni	0 01	..	..	Notification No. 564, dated the 6th August 1912, under Section 4 of the Indian Forest Act.
	0 01		0 01			
Risgaon and Karhai	2 51	Madhoban	0 22	..	..	Notification No. 531, dated the 10th June 1913, under Section 4 of the Indian Forest Act.
	2 51		0 22			
..	11 43	..	5 49			
..	
..	
A Class	0 11	..	..	..	..
A Class	0 13	A Class	0 07	..	..	Notifications Nos. 198 and 417, dated the 20th February and 24th April 1913, respectively, under Section 4 of the Indian Forest Act.
		C Class	0 02	..	..
A Class	0 06	A Class	3 34	..	..	Notifications Nos. 988 to 994, dated the 25th November 1912, under Section 4 of the Indian Forest Act.
C Class	0 02	B Class	0 32	..	..
		C Class	3 02	..	..
..	
..	..	Ghogal Block Antarmal village.	72	..	..	Notification No. 461, dated the 10th July 1912, under Section 4 of the Indian Forest Act.
	0 32	..	7 49	..	..
	15 595	..	19 122	..	..

FORM NO. 9.—Record of Demarcation and Maintenance of Boundaries, 1912-13.

District	Length of boundary actually demarcated in the year	Length of previously demarcated boundary reported	Length of previously demarcated boundary not reported	Total length of actually demarcated boundaries at close of the year	Length of boundaries still to be demarcated at close of the year	Length of natural boundaries not requiring artificial marks	Total length of boundaries at the close of the year	Expenditure on demarcation during the year		Remarks
								On new work	On repairs	
1	2	3	4	5	6	7	8	9	10	11
NORTHERN CIRCLE										
Mandla	..	2,053	324	2,377	...	259	2,636	..	2,617	* North and South Mandla excluding Dhanwahi Range.
Jubbulpore-Nainiwar	..	890	741	1,631	..	337	1,968	..	1,404	† Includes Dhanwahi Range also.
Damoh	..	649	747	1,396	..	361	1,757	..	1,060	
Saugor	17	954	902	1,773	..	223	1,996	817	879	
Hoshangabad	..	98	402	500	..	45	545	..	306	
Seoni	..	1,254	423	1,677	..	220	1,906	1	1,174	
Chhindwari	17	139	1,416	1,572	..	18	1,590	..	37	‡ No expenditure incurred
Total Northern Circle	34	5,037	4,955	10,926	..	1,472	12,398	818	7,477	
SOUTHERN CIRCLE										
Balaghat	1	373	893	1,267	..	119	1,386	22	1,141	
Bhindara	4	399	857	1,260	..	135	1,395	37	294	
Balaspur	..	189	236	425	..	148	573	..	125	
North-Chanda	..	1,105	966	2,071	..	230	2,301	..	2,739	
South-Chanda	..	762	10	772	..	95	867	..	1,340	Includes Rs. 11 spent on demarcating plots to be surveyed.
Nagpur-Wardha	..	472	702	1,174	..	107	1,281	..	1,644	
Raipur	..	884	330	1,214	..	126	1,340	..	971	
Total Southern Circle	5	4,184	3,994	8,183	..	960	9,143	59	8,254	
BERAR CIRCLE										
Malgat	A Class Forest	4	69	192	265	165	179	609	56	406
	B do. do.	..	..	12	12	..	12	..	..
	C do. do.	..	..	..	..	..	..	..	..
TOTAL	..	4	69	204	277	165	179	621	56	406
Amraoti	A Class Forest	..	150	176	326	..	12	338	..	555
	B do. do.	..	60	4	64	..	1	65	..	255
	C do. do.	..	100	3,031	3,131	..	17	3,148	..	267
TOTAL	..	..	310	3,211	3,521	..	30	3,551	..	1,077

FORM NO. 9.—Record of Demarcation and Maintenance of Boundaries, 1912-13.—(Concl'd.)

Division.	Length of boundaries artificially demarcated during the year	Length of previously existing boundaries not re-printed	Length of previously existing boundaries not re-printed.	Total length of artificially marked boundaries at close of the year.	Length of boundaries still to be demarcated at close of the year	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year	Expenditure on demarcation during the year.		Remarks	
								On new work	On repairs		
1	2	3	4	5	6	7	8	9	10	11	
	Miles.	Miles	Miles	Miles	Miles	Miles	Miles.	Rs	Ks		
Buldana .	A Class forests	34	411	475	...	15	490	.	299		
	B do do, ..	..	36	36	...	...	36	.	6	
	C do do, ..	76	77	577	...	..	653	...	387	
	Total ..	110	1,054	1,164	...	15	1,179	...	692		
Yestmal ...	A Class Forests.	437	413	850	...	48	898	...	604		
	B do. do ...	37	91	128	...	...	128	...	28	
	C do do ..	...	4,329	4,329	...	.	4,329	..	39	
	D do. do ...	...	115	115	...	..	115	...	..
Total ...	474	4,948	5,422	...	48	5,470	...	671			
Akola ...	A Class Forests.	129	600	729	...	11	740	...	542		
	B do, do. ...	26	123	149	...	...	149	...	147	
	C do. do. ...	...	..	..	...	...	...	...	66	
Total ...	155	723	878	..	11	889	...	755			
Nimar ...	A Class Forests.	389	669	1,058	5	301	1,364	...	1,778		
Total ...	389	669	1,058	5	301	1,364	...	1,778			
Betul ...	A Class Forests.	540	538	1,078	...	338	1,416	..	1,542		
	B do. do. ..	...	26	26	...	8	34	...	...
	Total ...	540	564	1,104	...	346	1,450	...	1,542		
Grand Total Berar Circle ...		4	2,047	11,373	13,424	170	930	14,524	56	6,921	Ra. 6,977.
GRAND TOTAL FOR C. P. AND BERAR.		43	12,168	20,322	32,833	170	3,362	36,065	933	22,652	

N. B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of sub-divisions, such as compartments and coupes.

FORM NO. 10.—Statement of Forest Areas

Division.	Area surveyed and under survey											
	Special surveys—Maps on 2" scale or over by Survey of India Department or Forest Survey Branch.						Ordinary included in Topographical Programme of the Survey of India or in District Surveys.					
	With interior details.			Boundary Surveys.			With interior details.			Boundary surveys.		
	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total cost	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.
	2	3	4	5	6	7	8	9	10	11	12	13
	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. M.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.
NORTHERN CIRCLE.												
Mandla*	11,209	...	94,301	...	...	...	...	...	...	53	...	...
Jubbulpore-Narsinghpur†	783	...	89,840	...	...	...	...	...	...	...	...	...
Damoh	794	...	2,12,429	...	...	...	...	...	...	...	...	...
Saugor	753	...	79,030	...	...	...	...	...	...	...	...	...
Hoshangabad	1,211	...	15,873	...	...	...	...	...	...	...	...	...
Seoni	827	...	60,146	...	...	...	...	...	...	...	...	...
Chhindwara	712	...	49,185	...	...	...	...	...	...	...	...	...
Total Northern Circle	6,787	...	6,01,804	...	...	...	...	...	...	53	...	...
SOUTHERN CIRCLE.												
Balaghat	954	...	46,963	...	...	...	...	...	...	...	...	...
Bhandara	533	...	36,822	...	...	...	...	...	...	...	...	...
Bilaspur	624	...	42,549	...	...	...	...	...	...	...	...	...
North Chanda	...	...	...	...	...	...	...	...	...	...	...	...
South Chanda	5,065	...	86,999	...	...	...	...	...	...	...	...	...
Nagpur-Wardha	705	...	60,467	...	...	...	...	...	...	...	...	...
Raipur	1,386	...	1,05,818	...	...	...	...	...	...	...	...	...
Total Southern Circle	7,268	...	3,76,618	...	...	...	...	...	...	...	...	...
BERAR CIRCLE.												
Melghat	1,167	...	...	...	...	...	...	...	...	...	...	...
Amraoti	...	...	...	...	...	...	39	...	...	259	...	...
Buldana	126	...	...	...	...	...	...	154	...	159	605	...
Wardha	...	...	...	...	...	...	608	124	6,762	2,197	...	20,366
Alakh	...	...	...	...	...	...	101	97	...	520	380	3,080
Nimar	1,067	...	5,508	...	...	...	...	...	...	...	...	...
Betul	4,189	...	20,156	...	...	...	...	...	...	...	...	...
Total Berar Circle	4,739	...	35,464	...	...	...	748	371	6,762	3,094	985	23,446
GRAND TOTAL FOR CENTRAL PROVINCES AND BERAR.	18,194	...	10,08,886	...	...	...	748	375	6,762	3,197	985	23,446

surveyed and under survey during the year 1912-13.

Chain and compass or other surveys by local officers.								Areas remaining to be taken under survey.	Total forest area at end of the year as per Form No. 7.	Cost.			Remarks.
With interior details.				Total Cost.	Boundary surveys.					Previous.	Of year.	Entire cost of all surveys to end of the year.	
4" or over		Under 4".			Previous.	Of year.	Total Cost.						
Pre-vious.	Of year.	Pre-vious.	Of year										
14	15	16	17	18	19	20	21	22	23	24	25	26	27
Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Rs.	Rs.	
2	4	2,570	94,301	..	94,301	*North and South Malilla excluding Dhanwah Range. †The Divisional Forest Officer reports that the area given in previous year's report was incorrect. {Includes Dhanwah Range also.
...	768	89,840	..	89,840	
...	793	2,12,429	...	2,12,429	
...	753	79,030	...	79,030	
...	939	18,873	...	18,873	
...	813	60,146	..	60,146	
...	717	49,185	...	49,185	
1	4	...	...	...	7,552	6,03,804	..	6,03,804	
...	976	45,963	..	45,963	
...	533	36,822	...	36,822	
...	6	...	...	...	663	41,549	...	41,549	
...	4	...	...	...	{ 1,402 1,493 }	86,990	..	86,990	
...		716	60,467	...	60,467
...	1,380	1,03,818	...	1,03,818	
...	10	...	...	...	6,906	3,76,618	...	3,76,618	
36	44	...	...	1,124	...	...	...	Nil.	1,167	2,13,126	699	2,13,827
40	540	...	...	...	155	240	1,971	...	1,971	
28	79	...	...	...	176	429	421	...	421	
...	1,826	28,323	30	28,373	
...	6	318	3,400	20	3,430	
...	29	1,686	5,308	1	6,309	
...	1,189	20,136	51	20,207	
110	44	...	...	1,743	...	...	...	366	6,265	2,78,707	321	2,79,028
111	44	...	...	1,743	14	...	...	366	20,574	12,53,129	821	12,53,950

FORM NO. 11.—Progress made in Working-Plans, during the year 1912-13.

Division	Areas for which working-plans have been submitted by the Government		Areas for which working-plans are being completed.		Areas for which working-plans have still to be taken in hand.	Areas for which working-plans are not at present required.	Total forest areas in Form No. 7 (a)	Entire cost per square mile of working-plans completed	Remarks.
	At commencement of year	During year	At commencement of year	Taken in hand during year.					
1	2	3	4	5	6	7	8	9	10
NORTHERN CIRCLE									
Mandla (North and South Mandla excluding Dhanwahi Range).	324	..	..	†119	...	‡2,127	2,570	...	† Rough scheme of working for Khannat forest.
Jubbulpore, Narsinghpur (including Dhanwahi Range).	768	...	..	...	...	...	768	...	‡ 803 square miles B. I. Class forest which is to be shortly disforested
Damoh	792	...	..	...	...	...	792	...	
Saugor	753	..	..	..	...	...	753	...	
Hoshangabad	740	..	..	...	...	199	939	...	
Seoni	813	...	..	...	...	...	813	...	
Chhindwara	666	...	666	...	...	‡ 51	717	...	§ B. I. Class ryotwari areas.
Total	4,100 [566]		666	119	...	2,377	7,352	...	
SOUTHERN CIRCLE									
Balaghat	126 *747	...	747	...	22	81	976	...	22 Square miles recently afforested.
Bhandara	533	...	..	...	..	...	533	...	
Bilaspur	*407	...	665	...	...	...	665	...	
North Chanda	1,110	...	..	...	...	(b) 272	1,402	..	
South Chanda	73 *501	...	552	...	...	(r) 761 (d) 307	1,293	...	(c) Mainly B Class, includes 19 square miles of forest. Village and 9 square miles likely to be disforested shortly.
Nagpur Wardha	*716	..	716	..	..	...	716	...	(d) Sironcha Range.
Raipur	*1,358	..	...	1,363	...	17	1,980	...	Forest villages (17 square miles).
Total	1,842 [*3,729]	...	2,680	1,363	22	1,058	6,965	...	

(a) Note.—Areas entered in column 7 should not be entered in column 6.
 Note.—Figures marked * in column 2 denote areas in which the current working-plans are under revision.
 (b) denotes B Class forests.

Division.	Areas for which working plans have been sanctioned by Local Government.		Area for which working plans are being completed.		Area for which working plans have still to be taken in hand	Area for which working plans are not at present required	Total forest areas in Form No 7	Entire cost per square mile of working plans completed	Remarks
	At commencement of year.	During year	At commencement of year.	Taken in hand during year					
1	2	3	4	5	6	7	8	9	10
BERAR CIRCLE.	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Rs.	
Melghat	...	693	..	474	...	..	1,167	...	
Amraoti	..	...	..	(a) 240	...	...	(a) 240	...	(a) Decrease of 13 square miles is due to C Class areas being disforested
Buldana	..	3	..	(b) 426	...	...	(b) 429	..	(b) Decrease of 17 square miles is due to C Class.
Yestmal	..	(19)	...	(c) 1 172	...	...	(d) 54 (e) 1,126	...	(c) Includes 19 square miles in column 2 which will be incorporated in the working-plan for the whole Division. (e) Increase of 9 square miles is due by transfer of certain villages from the Akola District. (d) Area of "C" Class which will shortly be disforested and therefore excluded from the working-plan.
Akola	..	(2)	..	(g) 318	..	...	(f) 318	...	(f) Decrease of 24 square miles is due partly by disforestation of C Class forest and partly by transfer of certain villages to the Yestmal District. (g) Includes 2 square miles in column 2 which will be incorporated whole in the working-plan for the Division.
Nimar	...	282	..	(h) 1,404	...	...	(i) 1 686	...	(h) Increase of 3 square miles is due to correction of areas by recalculation. (i) Decrease of 265 square miles is due to "I" forest areas being disforested for Ryotwari Settlement.
Betul	...	1,181	..	...	...	...	(j) 8 (k) 1, 89	...	(j) No working-plan is required for 8 square miles of "I" Class forest. (k) Decrease of 119 square miles is due to disforestation of areas for Ryotwari settlement
Total Berar Circle	2,159 [21]	...	4,534	...	...	62	6,255	..	
GRAND TOTAL FOR CENTRAL PROVINCES AND BERAR.	8,191 [4,416]	...	7,380	1,482	22	3,497	20,571	..	

New work undertaken during the year.							
District	Buildings.		Roads and paths.			Other works.	Total expenditure on new works.
	Description of building.	Expenditure incurred.	Description of road or path.	Length of road or path.	Expenditure incurred.	Expenditure incurred.	
	1	2	4	5	6	7	
NORTHERN CIRCLE		Rs.		Miles.	Rs.	Rs.	Rs.
Mandl. North and South excluding Dhanuichi Range).	Rest-houses ...	20	Cart roads ...	1	156	115	...
	Subordinates' quarters ...	2,349	Coupe and feeder roads ...	7	109	...	...
	Other houses ...	284	Inspection and other paths	4	25	...	...
			Alignment ..	6	10	...	...
	Total ...	2,653		18	300	115	3,068
Jubbulpore - Narasinghpur (including Dhanuichi Range)	Houses for Subordinate Establishment.	903	Regular cart roads ...	8	400	...	...
	Others ...	140	Coupe and feeder roads ...	4	200	...	...
	Total ...	1,043		12	600	...	1,643
Dhanuichi	Completed.						
	Subordinates' quarters ...	832	Cart roads ...	18	2,909	475	...
	Others ...	604	...	...	...	...	...
	In Progress.						
	Subordinates' quarters ...	342	Alignment ...	39	260	...	...
	Rest-house ...	813	Coupe and feeder roads ...	13	351	...	...
	Total ...	2,591		70	3,524	475	6,865
Saugor	Completed.						
	Houses for Subordinate Establishment.	1,046	Cart roads ...	3	476	...	...
			Feeder roads ...	8	164	...	...
	Others ..	275	Alignment ...	7	14	614	...
	Total ...	1,321		18	654	614	2,589
Hoshangabad	Completed.						
	Range quarters ...	550	Cart roads ...	36	(a) 10,680	548	...
	Building rest-houses ...	2,856	Alignment ...	110	1,081	...	...
	Houses for Subordinate Establishment.	1,722	..	...	...	...	...
	Others ...	865	...	...	...	...	...
	Total ...	5,993		146	12,761	548	18,302

and Buildings during the year 1912-13.

Repairs, executed during the year.							Remarks.
Buildings.		Roads and paths.			Other Works.	Total expenditure on repairs.	
Description of building.	Expenditure incurred.	Description of road or path.	Length repaired.	Expenditure incurred.	Expenditure incurred.		
9	10	11	12	13	14	15	16
	Rs.		Miles.	Rs.	Rs.	Rs.	
Rest-houses	140	Cart roads	89	636	224	...	
Subordinates' quarters	1,123	Coupe and feeder roads	9	33	...	...
Other houses	5176	Inspection and other paths	28	101	...	...	§ Includes Rs. 96 on account of pay of mali.
	1,439		126	770	224	2,473	
Rest-houses	28	Regular cart road	85	614	.	.	
Range officers' quarters	265	Coupe and feeder road	104	528	357	...	
Houses for Subordinate Establishment.	673	Path roads	2	12	...	...
	966		191	1,154	357	2,477	
Rest-house	249	Cart roads	18	642	527	...	
Range quarters	97	Coupe and feeder roads	...	59	...	...
Subordinates' quarters	509	...	...	...	...	...
	855		18	701	527	1,808	
Rest-houses	108	Cart roads	114	906	...	...
Rangers' quarters	134	...	...	...	...	...
Houses for Subordinate Establishment.	564	...	...	...	187	...	
	806		114	906	187	1,899	
Range quarters	253	Cart roads	254	2,085	304	...	(a) include Rs 736 on account of cost of Establishment employed on road work.
Rest-houses	186	...	...	...	...	...
Houses for Subordinate Establishment.	532	...	...	...	...	...
Others	284	...	...	...	...	...
	1,265		254	2,085	304	3,654	

Divs on.	New work undertaken during the year.						
	Buildings		Road, and path..			Other works.	Total expendi- ture on new works.
	Description of building.	Expendi- ture incurred	Description of road or path	Length of road or path	Expendi- ture incurred	Expendi- ture incurred	
1	2	3	4	5	6	7	8
NORTHERN CIRCLE.—(Conold)							
Seoni	Completed.	Rs		Miles.	Rs.	Rs.	Rs.
	Houses for Subordinate Establishment	673	Cart roads	2	495	1,434	...

	Total ..	673		2	495	1,434	2,602
Chhindwara	Completed						
	Houses for Subordinate Establishment	11	Regular cart roads	14	3,334	...	...
	..	...	..	...	...	258	..
			Alignment with road traces	10	6	...	...
	In Progress						
	Rest-house	325	...	...	...	...	...
	Houses for Subordinate Establishment.	683	..	...	...	...	...
	Total ..	1,019		24	3,340	258	4,617
General	...	...		..	...	900	900
GRAND TOTAL	...	15,293		290	20,674	4,344	40,311
SOUTHERN CIRCLE.							
Direction	..	...	...	...	...	...	...
Balaghat	Head-quarters houses	...	Regular cart roads	13	5,028	...	...
	Rest-houses	733	Coupe and feeder roads	..	...	...	...
	Subordinates' quarters	2,824	Inspection and other paths	...	...	...	...
	Other buildings	1,043	Alignments with road traces.	7	258	1,283	..
	Total ..	4,600		20	5,286	1,283	11,169
Balaghat School	Head-quarters houses	1,198	Regular cart road	...	163	...	...
	Total ..	1,198		..	163	...	1,361

and Buildings during the year 1912-13.—(Contd.)

Repairs executed during the year.							Remarks.
Buildings		Roads and paths.			Other works.	Total expenditure on repairs.	
Description of building	Length incurred	Description of road or path	Length repaired.	Expenditure incurred	Expenditure incurred.		
9	10	11	12	13	14	15	16
	Rs.		Miles	Rs.	Rs.	Rs.	
Rest-houses ..	360	Cart roads ..	92	353	78	1,756	
Houses for the Subordinate Establishment.	905	Coups and feeder roads ..	15	60	..	..	* Includes Rs. 84 on account of pay of a mali.
	1,265		107	413	78	1,756	
Rest-houses	32	Cart road	54	283	..	..
Range officers' quarters	51	..	..	..	..	..
Houses for Subordinate Establishment	60	..	..	..	234	..	
	143		54	283	234	660	
	
	6,739		864	6,312	1,911	14,962	§ Represents pay and travelling allowance of Tank overseer and his establishment.
Head-quarters houses ...	...	Cart roads	77	4,685	...	...
Rest-houses ...	376	Bridle paths ...	...	..	...	..
Subordinates' quarters ...	865	Other roads ..	142	666	...	...
Other buildings ..	22	..	...	..	333	...	
	1,263		219	5,351	333	6,946	
Head quarters houses ,...	1,038	Cart road ..	...	185	199	..	
	1,038		...	185	199	1,397	

NEW WORK UNDERTAKEN DURING THE YEAR.							
District	Particulars	Estimated cost	Roads and paths			Other works.	Total expenditure on new work
			Description of road or path	Length in miles	Expenditure incurred, Rs.	Expenditure incurred, Rs.	
1	2	3	4	5	6	7	8
SOUTHERN CIRCLE—(Contd.)							
Bhandara	Head-quarters, houses	...	Regular cart roads	2	1,661	...	...
	Rest-houses	470	Coupe and feeder roads	...	...	...	...
	Subordinates' quarters	754	Inspection and other paths	...	...	...	...
	Other buildings	14	Alignments with road traces	...	13	3,552	...
	Total	3,317			1,679	3,552	9,043
Bilaspur	Head-quarters, houses	...	Regular cart roads	13	4,261	...	...
	Rest-houses	1,163	Coupe and feeder roads	...	...	...	...
	Subordinates' quarters	2,687	Inspection and other paths	...	...	...	...
	Other buildings	...	Alignments with road traces	8	58	510	...
	Total	3,255		21	4,319	510	8,084
North Chanda	Head-quarters, houses	...	Regular cart roads	4	2,278	...	...
	Rest-houses	...	Coupe and feeder roads	...	60	...	...
	Subordinates' quarters	1,207	Inspection and other paths	...	69	...	...
	Other buildings	31	Alignments with road traces	3	40	663	...
	Total	1,328		7	2,447	663	4,438
South Chanda	Head-quarters, houses	...	Regular cart roads	5	2,093	...	...
	Rest-houses	...	Coupe and feeder roads	...	...	...	...
	Subordinates' quarters	689	Inspection and other paths	...	...	...	...
	Other buildings	368	Alignments with road traces	...	...	1,836	...
	Total	1,057		5	2,093	1,836	4,986
Nagpur-Wardha	Head-quarters, houses	...	Regular cart roads	7	2,661	...	...
	Rest-houses	2,577	Coupe and feeder roads	1	79	...	...
	Subordinates' quarters	1,164	Inspection and other paths	...	...	...	...
	Other buildings	44	Alignments with road traces	2	112	625	...
	Total	3,885		10	2,852	625	7,362
Raipur	Head-quarters, houses	...	Regular cart roads	18	4,897	...	...
	Rest-houses	610	Coupe and feeder roads	...	...	...	...
	Subordinates' quarters	2,979	Inspection and other paths	11	145	...	...
	Other buildings	...	Alignments with road traces	...	...	661	...
	Total	3,589		29	5,042	661	9,292
Total Southern Circle		22,724		95	23,881	9,130	55,735

and Buildings during the year 1912-13—(Contd.)

Repairs executed during the year.							Remarks.
Buildings.		Roads and paths.			Other works.	Total expenditure on repairs.	
Description of building.	Expenditure incurred.	Description of roads or paths.	Length repaired.	Expenditure incurred.	Expenditure incurred.		
9	10	11	12	13	14	15	16
		Rs.	Miles	Rs.	Rs.	Rs.	
Head-quarters houses	...	Cart roads	...	...	...	...
Rest-houses	101	Bridle paths	...	...	...	...
Subordinates' quarters	406	Other roads	154	458	...	...
Other buildings	17		...	...	257	...	
	524		154	458	257	1,242	
Head-quarters houses	...	Cart roads	...	...	...	...
Rest-houses	93	Bridle paths	10	15	...	...
Subordinates' quarters	210	Other roads	140	806	...	...
Other buildings	67		...	...	159	...	
	375		150	821	159	1,355	
Head-quarters houses	...	Cart roads	152	3,315	...	...
Rest-houses	386	Bridle paths	...	...	...	...
Subordinates' quarters	1,019	Other roads	...	...	...	...
Other buildings	14		...	...	778	...	
	1,419		152	3,315	778	5,512	
Head-quarters houses	...	Cart roads	575	2,304	...	...
Rest-houses	1,025	Bridle paths	40	97	...	...
Subordinates' quarters	* 1,274	Other roads	8	47	...	...
Other buildings	569		...	...	1,423	...	*Includes Rs. 325 on account of pay of establishment.
	2,868		623	2,448	1,423	6,739	
Head-quarters houses	...	Cart roads	231	761	...	...
Rest-houses	124	Bridle paths	...	...	...	...
Subordinates' quarters	814	Other roads	...	...	...	...
Other buildings	10		...	...	675	...	
	948		231	761	675	2,384	
Head-quarters houses	...	Cart roads	...	...	...	...
Rest-houses	101	Bridle paths	...	...	...	...
Subordinates' quarters	1,057	Other roads	222	1,168	1,642	...	
Other buildings	...		...	...	...	...
	1,158		222	1,168	1,642	3,968	
	9,593		1,751	14,507	6,193	30,293	

Roads.		Buildings.		Other works.		XXIII
New works	Rs. 23,881	New works	Rs. 22,724	New works	Rs. 9,130	
Old works	14,597	Old works	9,593	Old works	6,193	
Total	38,368	Total	32,317	Total	15,323	

Division.	New works undertaken during the year.						
	Buildings.		Roads and paths.			Others works.	Total expenditure on new works.
	Description of buildings	Expenditure incurred	Description of roads or paths	Length of road or path.	Expenditure incurred.	Expenditure incurred.	
1	2	3	4	5	6	7	8
BERAR CIRCLE.		Rs.		Miles.	Rs.	Rs.	Rs.
DIRECTION.	..	..		..	..	..	..
Meighat	Head-quarters houses	...	Regular cart roads	...	...	...	...
	Rest-houses	...	Coupe and feeder roads	...	...	...	...
	Subordinates' houses	666	Inspection and other paths	3 0	108	...	...
	Other houses	416	Alignment with road traces.	14 40	32	...	...
	Total	1,082		17 40	140	188	1,410
Amraoti	Head-quarters houses	...	Regular cart roads	...	...	...	...
	Rest-houses	441	Coupe and feeder roads	...	...	...	...
	Subordinates' houses	2 163	Inspection and other paths	...	...	...	...
	Other houses	50	Alignment with road traces.	...	...	...	...
	Total	2,654					2,654
Buldana	Head-quarters houses	...	Regular cart roads	8 40½	8,217	...	...
	Rest-houses	...	Coupe and feeder roads	...	...	...	...
	Subordinates' houses	...	Inspection and other paths	30	37	...	...
	Other houses	8	Alignment with road traces.	..	...	...	...
	Total	8		8 70½	8,254	1,121	9,383
Yestmal	Head-quarters houses	...	Regular cart roads	8 10	1,803	...	...
	Rest-houses	2,711	Coupe and feeder roads	...	...	...	...
	Subordinates' houses	5,506	Inspection and other paths	...	...	...	...
	Other houses	71	Alignment with road traces.	...	3	...	...
	Total	8,288		8 10	1,806	3,175	13,269
Akola	Head-quarters houses	...	Regular cart roads	17	5,500	...	...
	Rest-Houses	...	Coupe and feeder roads	...	...	...	...
	Subordinates' houses	2,500	Inspection and other paths	...	...	...	...
	Other houses	...	Alignment with road traces.	..	...	...	...
	Total	2,500		17	5,500	1,325	9,325
Nimar	Head-quarters houses	...	Regular cart roads	31	4,748	...	...
	Rest-houses	...	Coupe and feeder roads	...	...	...	...
	Subordinates' houses	4,574	Inspection and other paths	...	...	...	...
	Other houses	352	Alignment with road traces.	4	12	...	...
	Total	4,926		35	4,760	4,307	13,995
Betul	Head-quarters houses	...	Regular cart roads	...	...	...	...
	Rest-houses	...	Coupe and feeder roads	22	352	...	...
	Subordinates' houses	900	Inspection and other paths	...	...	...	...
	Other houses	118	Alignment with road traces.	24	50	...	...
	Total	1,018		46	402	585	1,945
	Total Berar Circle	20,476		132 40½	20,862	10,641	51,979
	GRAND TOTAL FOR C. P. AND BERAR	58,493		517 40½	65,417	24,115	1,48,025

and Buildings during the year 1912-13.—(Concl'd.)

Repairs executed during the year							Remarks.
Buildings.		Roads and paths.			Other works.	Total expenditure on repairs.	
Description of buildings	Expenditure incurred.	Description of roads or paths	Length repaired.	Expenditure incurred.	Expenditure incurred.		
9	10	11	12	13	14	15	
	Rs.		Miles.	Rs.	Rs.	Rs.	
	..		...	...	14	14	
Head-quarters' houses ...	180	Cart Roads ..	393 0	3,169	..	..
Rest-houses ...	930	Bridle paths ..	309 0	584	...	..
Subordinates' houses ..	822	Other roads ..	14 0	27	...	..
Other houses ..	835						
	2,767		721 0	3,780	373	6,920	
Head-quarters' houses ...	159	Cart roads ..	63 40	1,510	...	..
Rest-houses ...	177	Bridle paths ...	3 40	7	...	...
Subordinates' houses ...	411	Other roads ..	..	...	..	...
Other houses ..	21						
	768		72 0	1,517	326	2,611	
Head-quarters' houses ...	162	Cart roads ..	58 38	850	...	...
Rest-houses ...	145	Bridle paths ...	4 0	8	...	...
Subordinates' houses ...	475	Other roads ...	...	...	...	...
Other houses ...	20						
	802		62 38	858	567	2,227	
Head-quarters' houses ...	...	Cart roads ...	169 20	593	...	...
Rest-houses ...	1,161	Bridle paths ..	...	...	...	...
Subordinates' houses ...	668	Other roads ...	...	...	...	...
Other houses ...	32						
	1,861		169 20	593	1,048	3,502	
Head-quarters' houses ...	..	Cart roads ...	48 0	419	..	...
Rest-houses ...	35	Bridle paths ..	..	...	...	...
Subordinates' houses ...	359	Other roads ...	...	...	...	...
Other houses ...	...					
	394		48 0	419	317	1,130	
Head-quarters' houses ...	1,076	Cart roads ..	173 0	972	...	...
Rest-houses ...	402	Bridle paths ..	..	...	...	...
Subordinates' houses ...	1,323	Other roads ...	..	...	...	...
Other houses ...	315						
	3,116		173 0	972	1,020	5,108	
Head-quarters' houses ...	...	Cart roads ..	298 40	2,923	...	...
Rest-houses ...	25	Bridle paths ...	..	...	...	...
Subordinates' houses ...	1,219	Other roads ...	..	...	...	...
Other houses ...	...					
	1,244		298 40	2,923	318	4,505	
	10,952		1,554 18	11,062	3,983	25,997	
	27,284		4,159 18	31,881	12,087	71,252	

FORM NO. 13.—Register of Breaches of Forest Rules during 1912-13.

Forest Division.	Cases pending from previous year.	New cases of the year.					Total cases.	Disposed of during the year.						Cases pending at close of year.	Remarks.
		Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing with or without permission or in districts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Convictions.		Acquittals.		Total.			
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NORTHERN CIRCULAR															
Mandla (North and South excluding Dhanwahi Range).	A	1	2	7	2	4	14	10	8	22	2	7	10	29	6
	B	60	7	510	57	17	585	545	552	1,678			552	1,678	83
	C														
	Total	61	11	517	59	21	602	663	570	1,700	2	7	572	1,707	89
Jubbulpore-Narsinghpur (including Dhanwahi Range).	A	2		1	3		4	6	3	6	2	7	5	13	1
	B	72	20	214	201	12	447	419	457	1,363			457	1,363	62
	C		23	12	2		37	37							
	Total	74	43	227	206	12	488	562	460	1,369	2	7	462	1,376	63
Damoh	A			2	3	3	8	8	4	5		1	4	6	4
	B	52	8	216	222	2	448	500	362	1,102			362	1,102	138
	C		15	27	2		44	41							
	Total	52	23	245	227	5	500	552	366	1,107		1	366	1,108	142
Saugor	A	3		4	11	1	16	19	13	41	3	5	16	46	3
	B	31		235	336	10	581	612	578	1,587			578	1,587	34
	C		24	41	25		90	90							
	Total	34	24	280	372	11	687	721	591	1,628	3	5	594	1,633	37
Hoshangabad	A				2	1	3	3	3	6		1	3	7	
	B	6		63	64	1	128	134	117	383			117	383	17
	C		2				2	2							
	Total	6	2	63	66	2	133	139	120	389		1	120	390	17
Seoni	A	2		5		5	10	12	9	16	3	25	12	41	
	B	34	15	192	45	7	267	269	288	762			288	762	11
	C		7	4			11	11							
	Total	34	20	201	55	12	288	322	297	778	3	25	300	803	11
Chhindwara	A	8	4	18	10	6	39	46	23	53	10	47	33	100	13
	B	57	2	251	266	7	325	387	487	818			487	818	96
	C		7	8			15	15							
	Total	65	13	277	276	13	579	644	510	871	10	47	520	918	109
Grand Total	A	16	6	37	31	20	94	110	63	149	27	93	53	242	27
	B	210	50	1,081	1,195	56	1,492	1,792	2,851	7,093			2,851	7,093	441
	C		30	53	29		201	201							
	Total	226	136	1,121	1,255	76	3,277	3,603	2,914	7,242	27	93	2,934	7,276	468

Out of the 98 cases pending at the close of the year one was later cancelled.

N. B.—A. means cases taken into Court.
B. means cases disposed under Section 67 of Indian Forest Act, 1878.
C. means undetected cases.

FORM NO. 13.—Register of Breaches of Forest Rules during 1912-13.—(Contd.)

Forest Division.		New cases of the year						Disposed of during the year								Cases pending at close of year	Remarks.
		Cases pending from 1911-12	Imprisoned by fine	Unauthorised felling or appropriation of wood and minor forest produce	Grass without permission or on tracks in which grazing is prohibited.	Other offences	Total new cases of the year	Total cases	Convictions		Acquittals		Total				
									Cases	Persons	Cases	Persons	Cases	Persons			
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
SOUTHERN CIRCLE, C. P.																	
Belaghat	A	4	..	3	..	1	..	7	4	7	3	20	7	77	..		
	B	53	9	224	225	2	465	110	401	1,172	..	..	169	1,172	17	
	C	..	..	8	..	..	8	..	..	..	..	..	..	..	..
Total		57	9	235	225	3	471	117	403	1,179	3	20	176	1,179	47		
Chandara	A	1	..	7	3	..	10	11	7	15	3	3	10	16	1		
	B	1	..	136	190	1	327	328	314	952	..	..	314	952	11	
	C	..	13	18	..	..	31	32	..	..	..	..	..	..	..
Total		1	13	151	193	1	369	371	321	957	3	3	328	970	12		
Bilaspur	A	1	1	3	0	2	35	36	16	15	..	43	16	89	..		
	B	48	1	110	93	3	210	248	241	590	..	..	241	589	17	
	C	..	9	..	..	..	9	9	..	..	..	..	..	..	..
Total		49	14	113	102	5	234	283	257	611	..	43	257	607	17		
North Chanda	A	..	..	4	8	..	12	12	0	37	3	23	12	60	..	
	B	64	2	318	139	1	500	564	518	2,171	..	..	518	2,171	46	
	C	..	..	8	..	..	8	8	..	..	..	..	..	..	..
Total		64	2	320	147	1	520	584	527	2,208	3	23	530	2,231	46		
South Chanda	A	1	1	5	3	..	9	10	8	13	3	3	10	16	..		
	B	20	1	177	84	1	264	284	271	665	..	..	271	665	13	
	C	..	1	1	..	..	2	2	..	..	..	..	..	..	..
Total		21	3	183	88	1	273	296	279	678	3	3	281	681	13		
Nagpur-Wardha	A	2	1	7	8	3	19	21	12	28	1	1	13	79	8		
	B	11	..	44	108	7	154	165	158	448	..	..	158	448	7	
	C	..	15	19	..	..	34	34	..	..	..	..	..	..	..
Total		13	16	70	116	10	207	220	170	526	1	1	171	527	15		
Raipur	A	..	4	9	21	3	37	37	21	31	13	79	34	110	3		
	B	65	15	178	262	11	466	531	477	2,181	..	..	477	2,181	54	
	C	..	11	..	..	..	11	11	..	..	..	..	..	..	..
Total		65	30	187	283	14	514	579	498	2,212	13	79	511	2,291	57		
Total Southern Circle	A	9	7	37	52	9	104	114	77	216	25	173	102	368	19		
	B	263	30	1,231	1,097	26	2,387	2,646	2,448	8,178	..	..	2,448	8,178	198	
	C	..	50	54	..	..	104	104	..	..	..	..	..	..	..
Total		271	87	1,322	1,149	35	2,591	2,864	2,525	8,394	25	173	2,550	8,566	210		

N. S.—A. means cases taken into Court.
B. means cases disposed of under Section 47 of the Indian Forest Act, 1878.
C. means undetected cases.

FORM NO. 13.—Register of Breaches of Forest Rules during 1912-13.—(Concl.)

Forest Division	Cases pending from 1911-12	New cases of the year					Total new cases of the year	Disposed of during the year						Cases pending at close of year.	Remarks
		Injury to forest by fire	Unauthorized felling or appropriation of wood and minor forest produce	Grazing without permission or in tract in which grazing is prohibited	Other offences	Convictions		Acquitted		Total					
						Cases		Persons	Cases	Persons	Cases	Persons			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BIHAR CIRCLES															
Meighat	A	1	..	..	..	3	3	3	18	..	..	3	18	..	
	B	2	1	67	12	8	94	26	86	236	..	..	86	236	10
	C	..	..	..	..	..	..	..	..	..	..	..	..	..
Total		3	1	67	12	10	97	29	89	251	..	..	89	251	10
Amraoti	A	2	..	..	..	4	4	5	7	1	1	6	11	..	
	B	10	..	46	18	22	96	267	873	..	..	267	878	25	
	C	..	3	..	..	3	3	..	..	..	..	..	..	..
Total		12	3	46	18	27	103	272	880	1	1	273	889	25	
Gaidan	A	2	..	4	1	7	14	16	13	20	2	23	15	11	1
	B	21	..	159	112	29	201	869	813	2,350	..	..	813	2,350	26
	C	..	1	8	..	..	9	..	..	..	..	..	..	..
Total		23	1	171	113	36	224	885	826	2,370	2	23	828	2,383	27
Veermai	A	..	..	9	2	..	11	11	9	17	2	4	11	21	..
	B	69	4	668	1,253	111	2,046	2,105	2,004	14,177	..	..	2,004	14,177	101
	C	..	..	11	..	..	11	11	..	..	..	..	..	..
Total		69	4	688	1,255	111	2,058	2,127	2,013	14,194	2	4	2,015	14,198	101
Akola	A	..	..	6	15	..	21	16	23	24	27	22	50	..	* Two cases withdrawn and dealt with under Section 67.
	B	18	..	151	195	6	371	373	553	1,627	..	..	553	1,627	10
	C	..	..	3	..	..	3	3	..	..	..	..	..	..
Total		18	..	160	210	6	395	392	571	1,644	2	27	575	1,647	10
Nimar	A	1	..	1	2	6	12	13	10	23	1	3	11	26	2
	B	28	2	179	213	31	413	473	432	1,293	1	..	433	1,293	40
	C	..	5	22	..	..	27	27	..	..	..	..	..	..
Total		29	7	182	215	37	452	513	442	1,316	2	3	444	1,316	42
Betul	A	..	1	..	2	1	4	4	4	..	..	4	4	..	
	B	121	..	252	138	22	413	416	421	1,100	1	3	413	1,103	94
	C	..	23	..	..	..	23	23	..	..	..	..	..	..
Total		121	24	255	140	23	440	443	425	1,104	1	3	416	1,107	94
Grand Total Bihar Circles	A	5	2	23	29	16	70	76	62	111	10	61	72	123	3
	B	187	13	1,528	2,677	169	4,657	4,844	4,585	11,931	3	1	4,588	11,934	256
	C	..	22	44	..	..	66	66	..	..	..	..	..	..
Total		192	27	1,595	2,676	185	4,793	4,985	4,648	12,013	13	61	4,660	12,107	259
Total Central Provinces and Berar	A Cases	30	13	97	112	18	269	329	202	477	54	326	257	803	42
	B	799	93	4,449	4,939	351	10,028	10,782	9,885	27,861	2	3	9,887	27,863	894
	C	..	152	290	29	..	371	371	..	..	..	..	..	..
Total		829	258	4,737	5,080	359	10,668	11,482	10,087	28,339	56	329	10,144	28,668	937

N. B.—A. means cases taken into Court.
B. means cases disposed of under Section 67 of Indian Forest Act, 1878.
C. means undetected cases.

year 1912-13.

Division	Forest tracts	Year in which protection commenced	Area protected during 1911-12	Area attempted to be protected	Failures	Area actually protected	Cost.	Remarks.
1	2	3	4	5	6	7	8	9
	NORTHERN CIRCLE		Acres.	Acres.	Acres	Acres.	Rs.	
	<i>Systematically fire-protected areas.</i>							
North Mandla (old Mandla)	Mandla Range ...	...	9,009	9,009	2	9,007	658	1 Fire.
	Saurdal " "	...	787	787	140	647	47	1 "
	Total North Mandla ...		9,796	9,796	142	9,654	705	Failure 1'45 per cent.
South Mandla (old Mandla)	Jagmudal Range .	...	35,612	35,684	3	35,681	969	1 Fire
	Banjur " "	...	62,512	62,512	17	62,495	1,419	1 "
	Mounala " "	...	84,822	86,111	409	85,705	1,660	2 Fires.
	Kurunga " "	...	...	68,629	3,411	65,218	1,155	5 "
	Total South Mandla ..	...	182,976	253,310	3,870	249,369	5,203	Failure 1'53 per cent.
	Total Mandla (North and South).	...	192,772	263,035	4,012	259,023	5,908	
Jubbulpore-Narsinghpur (including Dhanwahi Range).	Munwala Range ..	...	37,366	38,865	180	38,685	1,017	2 Fires.
	Shora " "	...	7,077	10,235	2,948	7,287	401	5 "
	Jubbulpore " "	...	36,833	36,858	...	36,858	1,189	
	Bargi " "	...	2,261	2,261	10	2,251	162	1 Fire.
	Dhanwahi " "	...	45,472	47,116	2,102	45,014	537	5 Fires.
	Bachai " "	...	25,871	25,939	24	25,915	586	1 Fire.
	Lichhai " "	...	6,105	6,133	573	5,560	222	1 "
	Khaii " "	...	40,045	40,513	...	40,513	486	
	Total ..	...	201,030	207,920	5,837	202,083	4,600	Failure 2'81 per cent.
Damoh	Northern Range ...	...	16,983	53,964	5,237	48,727	582	8 Fires.
	Central " "	...	38,843	54,479	2,200	52,279	625	2 "
	South-Western " "	...	68,269	102,588	14,901	87,687	1,178	4 "
	South-Eastern " "	...	69,906	69,931	5,416	64,515	752	5 "
	Total ..	...	194,001	280,962	27,754	253,208	3,137	Failure 9'88 per cent.
Saugor	Saugor Range .	...	34,180	35,497	2,303	33,194	891	11 Fires.
	Rehli " "	...	43,112	54,190	80	54,110	996	1 Fire.
	Khurai " "	...	19,805	24,455	2,132	23,323	989	6 Fires.
	Banda " "	...	28,810	33,300	4,190	29,110	793	5 "
	Deori " "	...	31,052	29,718	4	29,714	968	1 Fire.
	Total ..	...	156,989	177,160	8,709	168,451	4,637	Failure 4'92 per cent.
Hoshangabad	Bori Range .	...	167,931	170,638	...	170,638	762	
	Sohagpur " "	...	59,545	59,715	...	59,715	1,471	
	Hoshangabad " "	...	41,216	53,854	...	53,854	1,482	
	Seoni " "	...	80,892	80,931	64	80,867	1,418	1 Fire.
	Rehatgaon " "	...	93,851	93,851	85	93,766	921	1 "
	Nagardha " "	...	80,504	80,686	...	80,686	624	
	Total ..	...	523,939	539,575	149	539,526	6,678	Failure 0'03 per cent.

FORM NO. 14.—[PRESCRIBED].—Area of Forest Tracts protected from Fire during the year 1912-13 — (Contd.)

Division.	Forest tract	Year in which protection commenced	Area protected during 1912-13	Area attempted to be protected	Enclosures	Area actually protected.	Cost.	Remarks.
	NORTHERN CIRCLE—(Contd.)		Acres	Acres	Acres	Acres	Rs.	
Sconi	Systemically fire-protected areas—(Contd.)							
	Konai Range	...	80,315	80,316	2	80,314	2,178	1 Fire.
	Gungauli	...	78,011	78,011	17	77,004	1,369	2 Fires.
	Uli	...	79,588	83,135	763	79,373	1,450	1 "
	Chhapra	...	5,561	6,336	131	6,225	454	2 "
	Dhaura	...	1,677	2,306	284	2,022	103	1 Fire.
	Narbad	...	8,731	10,001	...	10,001	524	
	Total	...	259,865	263,125	1,106	261,929	6,118	Failure 0.45 per cent.
Chhindwara	Umroth Range	...	30,935	52,715	335	52,380	453	7 Fires.
	Amawala	...	17,949	34,002	20	33,982	6	1 Fire.
	Ambra	...	25,311	71,639	176	71,463	701	4 Fires.
	Silkmani	...	45,242	47,716	64	47,652	528	3 "
	Sank	...	37,713	33,517	263	33,254	262	2 "
	Total	...	166,170	239,609	858	238,751	1,950	Failure 0.36 per cent.
	TOTAL NORTHERN CIRCLE.	...	1,692,786	1,971,486	48,515	1,922,971	33,028	Protected 97.54 per cent.
	SOUTHERN CIRCLE.							
Balaghat	Sonawani	1889	67,194	67,456	...	67,456	1,060	
	Paraswala	1872	65,834	68,384	3,519	64,865	955	3 Fires.
	Raigarh	1867	108,885	108,080	300	108,680	1,080	2 "
	Dhansu	1889	129,190	129,190	440	128,750	1,006	2 "
	Lanji	1896	42,650	42,686	1,257	41,429	1,099	3 "
	Baihar	1899	64,143	64,143	790	63,353	1,308	3 "
	Total	...	478,396	480,839	6,306	474,533	6,508	Failure 1.3 per cent.
Bhandara	Bawanthari	1894	79,668	69,017	30	68,987	998	1 Fire.
	Gaikhuri	1888	102,729	80,298	203	80,095	1,620	3 Fires.
	Pertabgarh	1894	63,382	62,605	833	61,767	1,500	4 "
	Wainganga	1894	38,173	40,226	44	40,182	692	2 "
	Total	...	283,952	252,146	1,115	251,031	4,810	Failure .44 per cent.
Bilaspur	East Lormi	1892	156,916	154,125	3,030	151,095	1,463	2 Fires.
	West Lormi	1892	126,369	126,704	...	126,704	1,590	
	Kuajathi Pantora	1888	49,839	62,470	914	61,556	955	3 Fires.
	Sonakhani	1870	58,090	67,664	1,200	66,464	565	4 "
	Total	...	391,234	410,963	5,144	405,819	4,573	Failure 1.25 per cent.
North Chanda.	Mohari	1873	237,842	243,874	...	243,874	5,729	
	Haveli	1891	126,810	126,810	...	126,810	3,523	
	Warora	1894	31,310	35,920	...	35,920	692	
	Gunjewahi	1888	24,266	24,482	574	23,908	451	3 Fires.
	Brahmapuri	1897	14,479	14,479	2,744	11,735	507	3 "
	Wairagach	1897	29,300	30,378	1,020	29,558	555	2 "
	Total	...	464,097	476,143	4,338	471,805	11,457	Failure .91 per cent.

FORM NO. 14.—[PRESCRIBED].—*Area of Forest Tracts protected from fire during the year 1912-13.*—(Contd.)

Division.	Forest tract	Year in which protection commenced.	Area protected during 1912-13	Area attempted to be protected	Failures.	Area actually protected	Cost	Remarks.
1	2	3	4	5	6	7	8	9
	SOUTHERN CIRCLE.		Acres.	Acres.	Acres.	Acres.	Rs.	
	<i>Systematic fire protected areas</i>							
South Chanda.	Allapilla	1873	72,045	72,046	...	72,046	2,857	
	Ghot	1897	83,661	83,901	106	83,885	669	1 Fire.
	Markhunda	1891	120,594	120,594	...	120,594	1,290	
	Shoncha	{ (a) 1897 (b) 1907	{ 56,623 97,901	{ 97,901 ...	{	{ 97,901 ...	{ 902 ...	(a) Partial protection. (b) Protection.
	Diaba	1899	106,099	107,017	95	106,912	1,918	1 Fire.
	Total	...	480,823	491,430	201	491,238	7,636	Failure '04 per cent.
Nagpur-Wardha	East Pench	1875	90,458	137,131	20	137,411	1,223	2 Fires.
	West "	1878	60,551	75,740	592	74,748	514	3 "
	Kandhali	1894	10,054	33,895	19	33,876	843	3 "
	Umer	1895	20,875	40,740	197	40,543	794	4 "
	Hingna	1874	12,553	42,780	165	42,115	328	1 "
	Arvi	1880	15,115	50,536	764	49,772	409	3 "
	Total	...	218,606	385,222	1,757	383,465	4,111	Failure 46 per cent.
Raipur	Laon	1889	46,458	46,572	962	45,610	1,065	3 Fires.
	Sirpur Khellai	1889	38,600	38,993	373	38,615	1,756	5 "
	Dhamtari	1896	67,065	67,858	2,510	65,348	1,385	4 "
	Singpur	1896	59,172	60,950	740	61,219	895	3 "
	Balod	1886	67,534	67,798	481	67,317	1,016	8 "
	North Sihawa	1890	152,711	155,413	14,068	141,345	1,634	6 "
	South Sihawa	1903	162,125	162,312	11,722	150,590	1,178	4 "
	Bilau Ghugwa	1900	1,606	1,606	223	1,383	40	1 "
	Total	...	595,601	601,511	31,084	570,427	8,959	Failure 5'17 per cent.
	Total Southern Circle	...	2,921,709	3,098,263	49,945	3,018,318	48,054	Protected 98'39 per cent.
Melghat	Sembadh Range	1872	77,696	77,696	...	77,696	7,167	1 Fire.
	Chamakund "		63,577	63,877	...	63,877		
	Butum "		77,242	81,992	41	81,951		
	Khandu "	1877	90,484	85,739	9	85,730	1	"
	Gugamal "		151,731	151,961	800	151,161		
	Chikalda "		31,242	34,242	...	34,242		
	Tapti Reserve	1911	26,834	26,862	500	26,362		1 "
	Total	...	522,106	522,369	1,350	521,019	7,167	Failures 258.
Amraoti	Amraoti	1881	18,483	18,382	58	18,324	1,066	3 Fires.
	Waru	1889	19,507	19,511	...	19,511		
	Total	...	37,990	37,893	58	37,835	1,066	Failure 15.

FORM NO 14.—[PRESCRIBED].—Area of Forest Tracts protected from fire during the year 1912-13.— (Concl'd.)

Division.	Forest tracts.	Year in which protection commenced	Area protected during 1912-13	Area attempted to be protected	Failure	Area actually protected	Cost.	Remarks.
1	2	3	4	5	6	7	8	9
	BHAR CIRCLE— (Concl'd)		Acres	Acres	Acres	Acres.	Rs.	
Buldana	Jalgaon Range	1893	34,395	34,430	1,487	32,947	1,853	1 Fire.
	Chikhli "	1860	68,335	68,345	...	68,345		
	Purna "	1880	21,291	22,067	...	22,067		
	Mehkar "	1881	28,956	28,956	...	28,956		
	Total	...	152,967	153,794	1,487	152,311	1,853	Failures 9.
Yeotmal	Yeotmal Range	1892	45,874	45,874	...	45,874	3,284	
	Dunwa "	1882	38,851	38,851	10	38,841		1 Fire.
	Kelapur "	1881	59,147	59,147	130	59,017		1 Fire.
	Wun "	1803	21,392	21,392	...	21,392		
	Pusad "	1880	153,541	156,041	...	156,041		
	Baldi Pindi Reserve	1908	2,432	2,432	...	2,432		
	Urda "	1908	4,489	4,489	...	4,489		
	Total	...	325,726	328,226	140	328,086	3,284	Failures 04.
Akola	Pangra Range	1882	44,591	44,591	...	44,591	1,427	
	Moina "	1891	21,824	21,824	25	21,799		1 Fire.
	Balapur "	1881	32,678	32,678	...	32,678		
	Murtzapur "	1902	25	25	...	25		
	Total	...	99,320	99,318	25	99,293	1,427	Failures 02.
Nimar	Khandwa Range	1877	44,452	42,897	90	42,807	11,726	1 Fire.
	Purana "	1875	94,458	93,698	...	93,698		
	Chandgarh "	1878	88,144	88,149	...	88,149		
	Singaji "	1893	41,429	41,378	635	43,743		1 Fire.
	Piplod "	1890	8,589	62,592	...	62,592		* Includes area of Bhainsa Range since abolished.
	Chandni "	1893	78,729	65,172	785	64,387		
	Burhanpur "	1893	80,185	110,297	9,640	110,657		3 Fires.
	Kalibhit "	1874	121,593	181,487	70	181,417		2 Fires.
	Total	...	557,979	688,670	11,270	677,400	11,726	1 Fire.
Betul	Ranipur Range	1880	52,031	52,184	543	51,641	7,168	Failures 16.
	Bhawargarh "	1875	79,652	79,902	...	79,902		4 Fires.
	Saonlgarh "	1875	80,380	80,380	1,571	78,809		2 Fires.
	Tapti "	1875	122,555	125,185	1,196	123,989		1 Fire.
	Dalka "	1897	72,423	31,350	...	31,350		
	Sawalmandha "	1898	49,011	4,151	...	4,151		
	Asir "	1901	122,177	123,809	730	123,079		2 Fires.
	Total	...	578,229	496,961	4,040	492,921	7,168	Failures 81 '79.
Total Bhar Circle			2,274,317	2,327,231	18,316	2,308,915	33,591	Protected 99 '21.
GRAND TOTAL CENTRAL PROVINCES AND BHAR.			6,888,812	7,396,980	116,776	7,280,204	1,14,773	Protected 98.

FORM No 15.

Division	C.—Fires beginning inside											
	A.—Fires caused by accident or through careless neglect in burning, etc., fires.		B.—Fires starting in the forest by trespassing, etc., etc.		Owing to carelessness or accident.							
					By workmen employed in the forest, by purchasers of or by police and by 3rd parties.		By villagers, travellers &c. passing through the forest.		By Railway Engines.		By lightning or by fire balloons.	
	No. of fires.	Area burnt in acres.	No. of fires.	Area burnt in acres.	No. of fires.	Area burnt in acres.	No. of fires.	Area burnt in acres.	No. of fires.	Area burnt in acres.	No. of fires.	Area burnt in acres.
1	2	3	4	5	6	7	8	9	10	11	12	13
NORTHERN CIRCLE.												
North Mandla (Old Mandla)	1	2	..	...	..	...	..	...	...	...	..	...
South Mandla (Old Mandla)	..	..	2	105	3	3,276	2	303	...	..	...	...
Jubbulpore Narsinghpore (Including Dhanwahi Range.)	1	6	2	96	6	2,276	1	10	...	...	...	...
Damoh	2	9,565	4	3,431	1	3,940	3	2,030	...	...	...	...
Gaugor	2	29	1	4	1	1,272	...	...	3	160	...	...
Hoshangabad	...	..	..	...	..	...	...	...	...	...	...	...
Seoni	3	288	3	18	2	131	...	...	...	..	...	...
Chhindwara	2	120	..	...	...	...	8	245	...	...	...	...
Total	11	10,010	12	3,654	13	10,695	14	2,588	3	160	...	...
SOUTHERN CIRCLE.												
Balaghat	3	69	2	777	3	700	...	...	...	...	...	...
Bhandara	3	44	1	135	3	606	2	63	2	267	...	...
Bilaspur	1	3,000	6	1,594	...	..	...	...	...	...	...	...
North-Chanda	..	...	...	...	...	...	...	...	2	380	...	...
South-Chanda	...	...	...	...	...	...	1	106	...	...	...	...
Nagpur-Mandla	3	233	2	18	...	...	7	218	...	...	...	...
Raipur	7	681	3	11,207	6	778	6	7,011	1	382	...	...
Total Southern Circle	16	4,027	14	13,731	12	2,084	16	8,298	5	1,035	...	...
BERAR CIRCLE.												
Meighat	1	800	...	...	...	...	3	550	...	...	...	...
Amraoti	...	...	...	...	1	4	...	...	...	...	...	...
Buldana	2	503	1	800	...	...	...	..	...	...	...	...
Yestmal	...	...	...	...	...	...	1	130	...	...	...	...
Akola	...	...	1	25	...	...	...	...	...	...	...	...
Nimar	1	70	...	...	2	470	...	...	1	95	...	...
Betul	3	2,061	...	...	5	1,972	...	...	...	...	...	...
Total	7	3,434	2	825	8	2,446	4	680	1	95	...	...
GRAND TOTAL FOR C. P. AND BERAR.	34	17,471	28	18,210	33	15,225	34	11,566	9	1,290	...	...

of forest fires 1912-13.

the Reserve or fire traced area.											
By intentional firing.								Causes unknown.		Total (A) (B) and (C).	
In order to obtain new grass.		In order to turn out game or to reduce cover.		Maliciously fired.		Total.					
No. of fires.	Area burnt in acres.	No of fires.	Area burnt in acres.	No of fires.	Area burnt in acres.	No of fires.	Area burnt in acres.	No. of fires.	Area burnt in acres.	No. of fires	Area burnt in acres.
14	15	16	17	18	19	20	21	22	23	24	25
...	1	140	2	140
...	5	3,374	2	386	9	3,870
...	1	573	8	2,859	4	2,876	15	5,837
...	4	5,970	9	8,788	19	27,754
...	4	1,432	17	7,244	24	8,709
...	2	149	2	149
...	2	131	2	759	10	1,196
...	8	245	7	493	17	858
...	1	573	31	14,016	44	20,835	98	48,515
...	1	3,500	4	4,200	4	1,260	13	6,306
...	7	936	...	...	10	1,115
...	2	550	9	5,144
...	2	386	6	3,952	8	4,338
...	1	106	1	95	2	201
...	1	715	8	933	3	573	16	1,757
...	1	97	14	9,168	10	10,028	34	31,084
...	3	4,712	36	15,729	26	16,458	92	49,945
...	4	1,350
...	2	54	3	58
...	1	120	4	1,483
...	1	10	2	140
...	1	25
...	4	10,585	8	11,220
...	1	7	9	4,040
...	13	31,21	9	10,836	31	18,316
...	4	4,885	80	32,966	79	48,129	221	116,776

FORM No. 16.—Area closed and open to Grazing during 1912-13.

Division.	Area in square miles.					Total area.	Remarks.
	Closed to all animals		Closed to browsers camels, goats or sheep		Open to all animals		
	Whole year.	Part of year	Whole year	Part of year	Whole year		
1	2	3	4	5	6	7	8
NORTHERN CIRCLE.							
Mandla (North and South Mandla excluding Dhawala Range)	259				2,311 ^a	2,570	^a Includes 803 square miles of I. class forest.
Jubbulpore Narsinghpur (including Dhawala Range)	100		663		5	768	
Danah	17				745	762	
Singor	157		48		548	753	
Hoshangabad	105	4			770	979	^b Includes 51 square miles of B. I. class forest.
Soni	112		671			811	
Chhindwara	101	46	54		526 ^c	717	
Total	971	50	1,115		4,905	7,342	
SOUTHERN CIRCLE.							
A CLASS.							
Balghat	261		713			974	
Bhandara	114		300			414	
Bilaspur	81		584			665	
North Chanda	375		705		11	1,110	
South Chanda	274		771		15 ^d	970	
Nagpur Waidha	121		486 ^e		110	716	
Raipur	253	351	766			1,370	^f To be deforested 170 square miles closed to goats only.
B CLASS.							
Bhandara			9			9	
North Chanda					292	292	
South Chanda					313	313	
Total A and B	1,510	351	4,201		781	6,955	
BERAR CIRCLE.							
CLASS "A" (TIMBER AND FUEL RESERVES).							
Melghat	160		618		374	1,151	
Amraoti	15	6	37			58	
Buldana	49		100			290	
Yestmal	96		410			535	
Akola	32		130			162	
Total	351	6	1,414		374	2,151	
CLASS "B" (GRASS RESERVES).							
Melghat	6					6	
Amraoti		18				18	
Buldana					9	9	
Yestmal	13		17			70	
Akola		15	6			21	
Total	19	33	23		9	84	
CLASS "C" (PASTURE GROUNDS).							
Melghat					164	164	
Amraoti					181	181	
Buldana					546	646	
Yestmal					120	120	
Akola							
Total					1,117	1,117	
CLASS "D" (VILLAGE FORESTS).							
Yestmal					15	15	
Akola					9	9	
Total					24	24	
Total excluding Nimar and Betul Divisions	2,800	30	1,437	9	1,515	5,386	
CLASS "A" (PERMANENT RESERVES).							
Nimar	154	21	1,509			1,684	
Betul	202		1,079			1,281	
Total	356	21	2,588			2,965	
CLASS B-I (AVAILABLE FOR AGRICULTURE).							
Nimar					8	8	
Betul					8	8	
Total Nimar and Betul	356	21	2,588		16	2,981	
Total Berar Circle	3,156	51	4,025	9	1,531	8,362	
GRAND TOTAL CENTRAL PROVINCES AND BERAR	3,337	71	5,744	9	2,000	10,572	

FORM No. 17.

FORM NO. 17.—Return of Grazing in the

Division.	Grazing on payment.						Number of animals.						
	At full rates including ordinary, commercial and nomadic rates.						At privileged rates.						
	Buffaloes.	Cows and bullocks.	Goats and Sheep.	Camels.	Other animals.	Fees received.	Buffaloes.	Cows and bullocks.	Goats and sheep.	Camels.	Other animals.	Fees received.	
												Actual.	Value at full rates.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
NORTHERN CIRCLE, C. P.						Rs.						Rs.	Rs.
Mandla (North and South excluding Dhanwahi Range).	36,801	1,32,011	10,402	...	3,167	82,036	*5	95,886	*18	..	*4	5,956	33,822
Jubbulpore-Narsinghpur (including Dhanwahi Range).	18,198	38,995	520	...	1,565	41,214	...	81,207	...	...	...	8,470	46,604
Damoh	29,846	30,813	23,615	...	442	47,683	...	123,402	...	...	...	11,569	53,988
Saugor	36,217	48,125	12,815	..	433	62,516	...	94,827	...	...	...	8,980	41,491
Hoshangabad	12,353	16,153	3,094	...	221	19,831	...	49,618	...	...	...	6,202	18,407
Seoni	25,682	66,787	8	...	136	61,266	1,429	97,626	..	...	...	9,510	42,783
Chhindwara	14,245	74,092	22,502	...	206	92,745	..	57,370	..	...	...	7,171	28,685
Total	173,722	407,976	72,996	..	4,868	4,07,411	1,434	590,326	18	...	4	57,858	250,080
SOUTHERN CIRCLE.													
Balaghat	7,817	32,328	...	...	168	28,706	869	42,618	410	...	83	3,535	33,375
Bhandara	2,486	14,612	...	...	3	21,187	1,210	39,026	..	...	...	5,181	20,723
Bilaspur	3,249	20,127	81	...	178	8,278	2,757	10,008	...	...	...	1,628	4,808
North Chanda	18,167	56,702	43,744	...	8	80,175	5,186	105,184	...	...	...	11,135	43,318
South Chanda	7,974	56,472	41,967	...	62	43,455	5,576	51,248	...	...	...	6,394	14,137
Nagpur-Wardha	12,348	36,620	16,192	...	93	55,924	...	39,121	...	...	...	17,326	59,452
Raipur	6,562	56,394	211	...	22	22,506	10,612	59,258	..	...	...	2,209	26,589
Total	44,902	236,596	45,134	...	506	1,81,569	23,378	372,123	410	...	83	49,472	1,80,599
	6,961	36,675	56,861	...	28	39,462	2,802	54,340	...	...	...	3,936	12,527
Total Southern Circle	51,943	273,271	102,195	...	534	2,20,831	26,180	426,463	410	...	83	53,408	1,93,126
BERAR CIRCLE, C. P.												Class "A". (Timber	
Melghat	10,059	56,950	27,410	...	1,592	17,450	...	...	...	...	...	...	...
Amraoti	1,604	16,675	...	...	...	23,120	...	...	...	...	...	...	...
Naldurga	1,599	37,222	91	...	3	18,400	...	...	...	...	...	...	...
Yatmal	2,550	98,192	...	...	...	36,494	...	...	...	...	...	...	...
Akola	136	52,549	...	...	6	19,959	...	...	...	...	...	...	...
Total	15,948	252,566	27,501	...	1,600	1,17,423	...	...	...	...	...	...	...

* The inclusion of these cattle under privileged rates is due

State Forests during 1910-13.

Grazing free.						Number of animals.						Total value of fees at full rates.	Grand total of value at full rates.
By right under Settlement						During the year of Government, or otherwise than under Settlement							
Buffaloes	Cows and bullocks	Goats and sheep	Cattle	Other animals	Value of license at full rate	Buffaloes	Cows and bullocks	Goats and sheep	Cattle	Other animals	Value of license at full rate		
15	16	17	18	19	20	21	22	23	24	25	26	27	28
					Rs.						Rs.	P.	
100	1			1	100	34	4,102		100		921	921	106,779
11	100	1		100	100	11	897	100	100		500	500	82,438
12					100	12	50	1		100	22	22	101,691
100	100	100	100	1	1	1	1	100	10	100	11	11	104,007
10	100			1	1	166	7,156	20	11	100	2,790	2,790	41,228
1	100	100		1	100	11	416	100	100	100	199	199	101,243
1	100			1	100			100		100			121,430
1	1			100	1	202	13,027	20	10	100	1,432	4,432	652,823
100	100	100	100	100	100			100	1	100	100	1	62,081
100	100	100	1	1	1		100	10	1	100	10	100	1,910
		10	11	1	100	37	1,015	11	100	1	272	272	13,058
100	1	100		100	10	183	1,316	87	1	100	646	646	94,189
1	100	100	100	100	100	120	1,596	202	100		210	210	57,801
1	100	100		100	100	34	212	29	100	10	180	180	1,15,536
10	11	100	100	11	11	418	1,182	100	100		1,190	1,190	50,039
100	100	100	10	10	100	772	7,321	332	100	10	2,498	2,498	3,73,466
100	100	10		100	100	10	10	100	100	10	100	100	52,019
100	100	100	100	100	100	772	7,361	332	10	10	2,498	2,498	4,25,485
and Forl Reserves).							11,350	5	100	1	2,504	2,504	19,864
100	100	100	100	10	10	17	312	100	10	1	130	130	23,250
1	100	10	100	10	100	103	685	10	100	1	327	327	18,777
100	240	100	100		90	101	1,245	100	100	1	235	235	38,819
100	125	1	100	100	47	100	100	100	100	100	100	47	20,206
100	365	100	100	100	137	120	15,602	2	100	1	3,188	3,3	1,20,746

to mistakes made by vendors in issuing licenses at privileged rates.

FORM NO. 17.—Return of Grazing in the

Division.	Grazing on payment. Number of animals.													
	At full rates.						At privileged rates.						Fees received.	
	Buffaloes.	Cows and bullocks.	Goats and sheep.	Camels.	Other animals.	Fees received.	Buffaloes.	Cows and bullocks.	Goats and sheep.	Camels.	Other animals.			
												Actual.	Value at full rates.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
BERAR CIRCLE.—(Consolid.)														
Meighat	...	...	...	...	...	Rs.	...	...	...	...	...	Rs.	Rs.
Amraoti	1,032	2,121	...	...	...	\$79	...	...	...	...	...	...	...
Buldana	16	205	...	...	...	154	...	200	...	...	...	13	75
Yestmal	890	9,189	...	...	...	3,845	...	...	...	...	...	...	...
Akola	...	3,030	...	...	...	1,415	...	...	...	...	...	...	...
Total	1,718	14,548	...	...	...	5,973	...	200	...	...	...	13	75
CLASS "C"														
Meighat	...	...	...	...	...	...	...	...	...	...	...	...	...
Amraoti	30,170	123,131	107,731	...	144	\$7,784	...	...	...	...	...	...	...
Buldana	22,781	94,673	151,329	5	\$10	37,916	...	...	...	...	...	...	...
Yestmal	75,758	194,994	161,896	90	670	100,273	...	...	...	...	...	...	...
Akola	20,887	78,017	53,297	1	456	27,998	...	...	...	...	...	...	...
Total	149,596	590,815	474,253	96	1,780	223,971	...	...	...	...	...	...	...
Total excluding Nimar and Betul.	166,422	886,958	491,754	96	3,380	347,367	...	200	...	...	...	13	75
CLASS "A"														
Nimar	Ordinary	22,318	33,822	440	...	17	27,540	...	85,906	...	...	5,400	18,339
	Nomadic	1,870	3,802	129	...	11	4,168	...	...	...	...	...	...
	Commercial	15,092	31,262	5	...	64	38,603	...	...	...	...	...	...
Betul	Ordinary	3,904	22,398	...	...	138	9,218	...	57,047	...	...	3,190	19,143
	Nomadic	15,580	40,424	...	...	84	41,626	...	...	...	...	...	...
	Commercial	...	...	...	...	...	...	...	...	...	...	...	...
Total	Ordinary	26,222	56,220	440	...	155	36,758	...	136,953	...	...	8,590	37,482
	Nomadic	17,150	44,226	129	...	95	46,094	...	...	...	...	...	...
	Commercial	15,092	34,262	5	...	64	38,603	...	...	...	...	...	...
CLASS B-1														
Nimar	...	...	...	...	...	...	...	...	...	...	...	...	...
Betul	Ordinary	...	...	461	...	...	...	...	...	...	...	...	...
	Nomadic	...	...	1,219	...	...	...	...	...	...	...	...	...
Total	...	...	1,680	2	...	...	...	...	...	...	...	...	...
Total Nimar and Betul	58,404	124,703	2,254	2	371	121,729	...	136,953	...	...	...	8,590	51,482
GRAND TOTAL BERAR CIRCLE	226,886	1,021,667	404,008	98	3,694	499,095	...	137,253	...	...	...	8,603	52,557
TOTAL CENTRAL PROVINCES AND BERAR.	4,50,531	1,734,713	609,790	98	9,096	1,097,388	27,614	1,142,928	428	...	87	1,19,562	5,04,698	

State Forests during 1912-13—(Contd.)

Grazing free. Number of animals.													
By right under Settlement.						During pleasure of Government or otherwise than under Settlement.						Total value of fees at full rates.	Grand Total of value at full rates.
Buffaloes.	Cows and bullocks.	Goats and sheep.	Camels.	Other animals.	Value of fees at full rates.	Buffaloes.	Cows and bullocks.	Goats and sheep.	Camels.	Other animals.	Value of fees at full rates.		
15	16	17	18	19	20	21	22	23	24	25	26	27	28
GRASS RESERVES.													
					Rs.						Rs.	Rs.	
100	100	100	100	100	100	100	100	100	100	100	100		
100	100	100	100	100	100	100	100	100	100	100	100	779	
100	100	100	100	100	100	100	2,014	100	100	100	755	755	904
100	100	100	100	100	100	100	100	100	100	100	100	3,845	
100	100	100	100	100	100	100	100	100	100	100	100	1,415	
100	100	100	100	100	100	100	2,014	100	100	100	755	755	5,805
PASTURE GROUNDS.													
100	100	100	100	100	100	100	100	100	100	100	100		
100	100	100	100	100	100	100	18,569	100	100	100	4,533	4,533	62,317
100	100	100	100	100	100	100	32,958	37	100	100	6,184	6,184	44,100
100	100	100	100	100	100	100	123,991	100	100	100	23,249	23,249	125,523
100	100	100	100	100	100	100	15,118	100	100	100	2,450	2,450	30,458
100	100	100	100	100	100	100	188,716	37	100	100	36,426	36,426	250,397
100	365	100	100	100	137	131	206,352	40	100	100	40,367	40,367	287,945
PERMANENT FOREST RESERVES.													
100	100	100	100	100	100	100	4,883	19	100	38	1,731	1,731	61,610
100	100	100	100	100	100	100	100	100	100	100	100	4,468	
100	100	100	100	100	100	100	100	100	100	100	100	38,603	
100	100	100	100	100	100	100	193	8	100	93	93	18,453	
100	100	100	100	100	100	100	100	100	100	100	100	41,616	
100	100	100	100	100	100	100	100	100	100	100	100	100	
100	100	100	100	100	100	66	5,075	57	100	38	1,823	1,823	90,053
100	100	100	100	100	100	100	100	100	100	100	100	46,094	
100	100	100	100	100	100	100	100	100	100	100	100	38,603	
AVAILABLE FOR CULTIVATION.													
100	100	100	100	100	100	100	100	100	100	100	100	100	
100	100	100	100	100	100	100	100	100	100	100	100	100	
100	100	100	100	100	100	100	100	100	100	100	100	100	
100	100	100	100	100	100	100	100	100	100	100	100	100	
100	100	100	100	100	100	66	5,075	57	100	38	1,823	1,823	1,024
100	365	100	100	100	137	137	211,427	97	100	40	42,190	42,190	252,980
100	365	100	100	100	137	137	1,161	221,815	480	100	40	42,190	16,51,388

FORM NO. 18.—[PRESCRIBED].—Artificial reproduction during the Forest year 1912-13.

Division.	Kind of plantation.	Area in acres.				Expenditure during the year.		Total expenditure from commencement.		Revenue during the year.	Total revenue from date of creation of plantation.	Remarks.
		On 1st July 1912.	Added during the year.	Excluded during the year.	Area on 31st June 1913.	Creation.	Up-keep.	Creation.	Up-keep.			
1	2	3	4	5	6	7	8	9	10	11	12	13
	NORTHERN CIRCLE.					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
	REGULAR PLANTATION.											
Saugor	Bamboo plantation maintenance and watering. Nursery and digging pits for plantation.	238	178	100* 44†	273	552	...	1,955	...	...	...	* Owing to recalculation of area. † Plantation unsuccessful.
Seoni	Teak	...	361	...	361	(a) ‡	...	(b) 227	(c) 105	...	...	(a) Spent on tree planting.
	Teak and Bamboos	...	1	...	1	...						(b) Expenditure on Kural garden upkeep Rs. 61.
	Sandal Plantation	...	3	...	3	...						(c) Expenditure previous to 1907-08 is not known.
	Total	603	178	144	637	555	...	2,182	105	...	...
	CULTURAL OPERATION.											
Mandla	.....	860	309	860	309	No expenditure.		...	...	...	...
Damoh	.....	12	...	...	12	...	31	10	14	...	...	§ Spent on maintenance.
Saugor	Sowing Anjan seeds, 1,100 pits weeding and fencing in Mohli.	100	30	402	90	15	...	81	...	...	...	† Unsuccessful.
	Watering and fencing bamboo seedlings in Mandla Jalandhar Felling Series.	...	‡	...	‡	13	...	13	...	...	...
Seoni	.....	6	...	6	...	...	...	37	6	...	...
Chhindwara	.....	5	...	5	...	...	...	25	...	...	...
	Total	983	339‡	911	411‡	28	3	164	20	...	...
	NORTHERN CIRCLE.	1,587	517‡	1,055	1,048‡	583	3	2,346	125	...	...
	SOUTHERN CIRCLE.											
	REGULAR PLANTATIONS.											
North Chanda	Sandal wood plantations	156	...	...	156	...	24	...	27	...	...
	Total Regular plantation	156	...	...	156	...	24	...	27	...	...
	CULTURAL OPERATIONS.											
Bhandara	Sowings of Teak and Dhama	4	...	4	...	...	...	2	...	...	...
Bilaspur	Sowings of Miscellaneous species	1	...	...	1	...	56	67	861	...	...
North Chanda	Do do.	...	2	...	2	28	...	28	...	...	...
South Chanda	Sowings of teak etc.	105	30	101	34	23	12	165	165	...	...
Nagpur-Wardha	Do do.	54	4	...	58	54	107	1,175	126	...	...
	Total Cultural Operations	164	36	105	101	107	175	1,438	1,144	...	...
	Total Southern Circle	164	36	105	101	107	175	1,438	1,144	...	...

Note.—Upkeep includes weeding, thinning, clearing, etc. Cultural operations are defined in the memorandum appended to Circular No. 107, dated the 21st August 1907.

FORM NO. 18.—[PRESCRIBED].—Artificial reproduction during the Forest year 1912-13.—(Concl'd.)

Division.	Kind of plantation.	Area in acres.				Expenditure during the year.		Total expenditure from commencement.		Revenue during the year.	Total revenue from date of creation of plantation.	Remarks.
		On 1st July 1912.	Added during the year.	Excluded during the year.	Area on 30th June 1913.	Creation.	Up-keep.	Creation.	Up-keep.			
1	2	3	4	5	6	7	8	9	10	11	12	13
BERAR.												
REGULAR.												
Akola	Bamboo plantation at Yeota	25	...	...	25	...	38	329	1,069	601	5,297	
	Do. do. at Karanja	2	...	...	2	...	85	97	554	...	...
	Total regular plantations	27	...	...	27	...	123	426	1,613	601	5,297	
TAUNGYA.												
Amraoti	Babul (sowings)	1,476	259	*101	1,634	...	...	1,019	469	...	...	* Transferred to Cultural operations.
	Miscellaneous species	1,568	140	...	1,708	...	23	2,023	304	...	...
Buldana	Babul (sowings)	1,374	133	...	1,507	8	...	1,742	895	...	...
	Anjan (sowings)	10	...	...	10	...	...	13	18	...	...
	Teak and mixed species	64	...	...	64	15	40	33	40	...	...
Yestmal	Mixed species	100	...	†100	...	...	...	...	...	...	...	† Abandoned since last year.
Akola	Babul	893	139	54	978	222	...	1,412	44	...	554	
	Total Taungya Plantations	5,485	671	255	5,901	240	63	8,141	1,770	...	554	
CULTURAL OPERATIONS.												
Melghat	Miscellaneous	...	...	...	...	...	127	...	473	...	...
Amraoti	Babul	252	*101	...	353	67	104	746	586	...	...
	Experimental sowings	15	7	...	22	85	33	386	161	...	...
	Teak sowings	45	300	150	195	39	60	263	318	...	...
Buldana	Babul and Nim Seedlings	3	134	134	3	4	2	31	11	...	...
	Anjan sowings	4	4	8	...	46	3	111	24	...	...
	Bamboo (<i>Dendrocalamus strictus</i>) sowings	40	15	...	55	14	40	230	54	...	...
	Bamboo planting	31	...	...	31	122	600	652	1,471	...	...
	Sandal seed sowings	20	11	...	35	1	15	45	24	...	...
	Catalpa sowing in the compound of Divisional Forest Officer's Government Bungalow.	...	...	...	...	...	...	8	...	...	...
Yestmal	Experimental sowings of Bamboos	120	45	117	48	539	315	952	780	...	...
	Various bamboo plantations	16	...	...	16	176	316	1,417	2,510	...	...
Akola	Sandal sowings	...	...	...	...	92	...	155	...	...	...
	Lac planting	...	...	...	...	6	...	6	...	...	...
Nimar	Garden of fruit trees and vegetables containing also teak and bamboos.	1	...	...	1	...	95	111	420	...	179	
Betul	Miscellaneous	...	...	...	...	6	...	52	35	...	...
	Total Cultural Operations	537	617	409	745	997	1,740	5,134	6,857	...	179	
	Total Berar Circle	6,049	1,288	664	6,673	1,237	1,910	13,771	10,239	602	6,030	
	GRAND TOTAL CENTRAL PROVINCES AND BERAR	7,955	1,947	1,224	7,678	1,927	2,117	17,555	11,534	601	5,930	

Note.—Total cost as per columns 9 and 10 comes to Rs. 5,152 1/2. Add cost incurred in District Division Office on account of railway fare and carriage of bamboo seeds from Balaghat Rs. 10 1/2.

Total cost as per column 11 Rs. 5,162 1/2.

FORM NO. 19.—[PRESCRIBED].—*Outturn (in cubic feet, solid) of*

Division.	Timber in the rough; logs.					Timber in the rough; poles.					Sawn or square timber.				
	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
NORTHERN CIRCLE.															
<i>I.—Reserved Forests.</i>															
Mandla (North and South excluding Dhanwahi Range).	1,458	27,329	16	...	28,803	8,102	1,148,814	9,261	...	1,166,477	63	51,954	...	...	54,017
Jubbulpore-Narsinghpur (including Dhanwahi Range).	...	4,878	...	...	4,878	24,300	459,804	1,710	...	485,814	...	...	...	...	...
Damoh	...	...	...	...	...	223,461	15,360	469	...	239,290	1,539	...	...	...	1,539
Saugor	...	59	...	...	59	20,003	215,614	2,440	...	238,057	...	...	...	...	...
Hoshangabad	...	1,154	...	...	1,154	17,543	68,595	3,801	...	90,039	...	101,174	...	...	11,174
Sconi	...	2,721	41,866	42	44,629	3,586	25,554	974	...	30,514	...	1,120	...	...	1,120
Chhindwara	...	123	157	...	280	25,378	135,621	5,450	...	166,449	...	...	...	...	...
Total	4,361	75,384	58	...	79,803	323,173	2,072,362	24,105	...	24,10,640	1,602	156,248	...	...	157,850
SOUTHERN CIRCLE.															
<i>I.—Reserved Forest.</i>															
Balaghat	...	3,389	5,055	...	8,444	9,291	362,532	13,425	...	385,248	366	62,152	...	...	62,518
Bhandara	...	953	100,380	...	101,333	11,285	1,433,142	3,016	...	1,447,643	...	...	...	...	...
Bilaspur	...	68,725	259,935	...	328,660	116,628	686,587	32,02	...	806,417	387	...	...	...	387
North Chanda	...	6,220	36,119	420	42,759	18,912	520,055	18,792	...	567,659	...	...	...	...	...
South Chanda	...	16,225	50,120	...	66,345	11,876	219,750	23,110	...	254,726	2,778	...	...	...	2,778
Nagpur-Wardha	...	3,180	...	...	3,180	10,710	373,417	86	...	384,313	...	...	...	...	...
Raipur	...	12,616	105,111	94	117,821	46,771	790,588	9,596	...	846,655	98	7	...	...	105
Total { A Class	105,877	542,561	514	...	648,952	213,697	4,132,988	71,433	...	4,418,118	3,607	62,159	...	...	65,766
{ B Class	5,473	14,739	...	...	20,170	11,776	262,983	...	...	274,759	42	...	...	...	228
Grand Total	111,350	557,290	514	...	669,122	225,473	4,395,971	71,433	...	4,692,877	3,649	62,159	...	...	65,994
BERAR CIRCLE.															
<i>I.—Class "A" Timber and Fuel Reserve.</i>															
Melghat	...	507	...	...	507	116,594	77,355	...	85,545	259,474	...	120,424	...	...	120,424
Amrekh	...	617	20,216	160	20,993	...	...	...	...	...	...	...	...	...	...
Balkana	...	...	...	...	...	2,010	27,358	184	...	29,552	...	...	...	...	...
Yotmal	...	...	...	...	...	18,418	26,571	2,870	...	47,859	...	...	...	...	...
Akala	...	...	...	...	...	7,305	65,538	558	...	73,401	...	...	...	...	...
Total	1,124	20,216	160	...	20,993	147,428	109,817	2,612	...	267,364	...	120,424	...	...	120,424

Charter should be shown by a separate line, for quantity of wood contained in the Remarks column of this form it should be shown which of the rights entered in it are actual.

Timber and Fuel during the year 1912-13 and Agency of Exploitation.

Miscellaneous.					Total timber.					Fuel.					Total	Remarks.
Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.		
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	
27,111	481	...	...	27,592	37,034	1,230,578	9,277	...	1,276,833	100	673,179	187,484	...	762,772	2,037,622	
...	...	...	...	...	21,300	451,682	1,710	...	490,692	6,810	1,422,129	157,339	...	1,586,258	2,076,950	
...	...	...	...	...	225,000	15,160	469	...	240,629	443,535	222,920	...	...	666,455	907,290	
2,378	...	...	...	2,378	22,440	215,614	2,140	...	240,194	16,737	959,762	3,260	...	979,369	1,219,853	
...	34,877	...	...	34,877	1,7643	205,820	3,801	...	227,144	22,772	242,079	9,240	...	274,091	501,335	
500	2,201	...	...	2,701	7,007	70,741	1,016	...	78,764	26,085	72,165	15,722	...	765,172	843,935	
456	...	...	...	456	23,957	1,877,773	5,450	...	170,185	23,262	399,521	3,448	...	426,231	956,416	
30,245	37,559	...	...	67,804	329,381	2,241,553	24,163	...	2,725,037	5,8021	4,641,931	274,495	...	5,458,345	8,183,442	
...	...	...	...	...	11,046	430,339	13,425	...	456,810	34,108	1,272,344	132,330	...	1,400,772	1,857,582	
...	...	...	...	...	12,218	1,533,523	3,216	...	1,548,976	21,150	5,352,721	5,600	...	5,390,471	6,939,447	
...	1,364	...	...	1,364	185,740	947,586	3,822	...	1,136,828	2,227	278,270	51,612	...	339,709	1,469,537	
300	1,064	181	...	1,545	25,432	567,138	19,393	...	611,963	10,840	2,142,829	23,203	...	2,176,872	2,788,833	
101	15,323	...	...	15,424	30,000	285,123	23,116	...	339,239	3,150	2,004,847	107,400	...	2,175,397	2,514,686	
66	...	...	...	80	13,970	373,417	85	...	387,473	220,341	3,708,766	840	...	5,421,942	3,809,420	
...	...	...	...	...	59,455	895,706	9,690	...	954,851	117,176	1,300,835	212,950	...	1,441,013	2,405,294	
356	3,243	181	...	3,780	323,537	4,740,971	72,128	...	5,176,635	411,152	13,404,083	544,927	...	14,460,162	10,586,798	
125	14,508	...	...	14,633	17,354	292,230	...	...	309,584	440	1,888,579	...	...	1,889,019	2,190,603	
481	27,751	181	...	18,413	340,891	5,033,201	72,128	...	5,446,220	471,592	15,182,662	544,927	...	1,63,39,181	21,785,401	
...	...	...	...	...	117,101	107,779	...	65,325	380,405	2,456	225,200	...	52,200	752,916	1,132,561	
...	...	...	...	...	617	20,216	160	...	20,993	23,435	206,439	250	...	320,635	341,628	
26	2,372	742	4,040	7,158	2,038	24,725	932	4,416	31,742	13,358	196,223	...	127,213	330,822	362,564	
...	...	...	...	...	18,418	26,571	2,870	...	47,859	65,507	332,964	...	12,800	321,161	379,420	
...	...	...	...	...	7,900	63,661	258	...	73,825	60,018	592,008	600	...	659,451	759,976	
28	2,495	240	2,020	7,713	16,950	272,522	2,221	50,571	252,522	192,738	1,268,111	1,880	661,211	2,091,225	2,047,549	

In producing it being entered in table free sold and which are only available, it being also noted in the latter case how the figures have been material.

FORM NO. 19.—[PRESCRIBED].—Outturn (in cubic feet, solid) of

Division	Timber in the rough, logs.					Timber in the rough, poles.					Sawn or square timber.				
	Government.	Purchasers.	Free Grants.	Rights.	Total.	Government.	Purchasers.	Free Grants.	Rights.	Total.	Government.	Purchasers.	Free Grants.	Rights.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
BERAR CIRCLE															
II.—Class "B" (Grass Reserves).															
Melghat	...	...	...	...	...	...	...	291	...	...	291	...	...	...	...
Amraoti	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Buldana	...	...	...	...	...	...	...	168	...	...	168	...	...	...	...
Yeshmal	...	...	...	...	...	...	...	2,562	...	...	2,562	...	...	...	...
Akola	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	3,021	...	...	3,021	...	...	...	...
III.—Class "C" (Pasture grounds).															
Melghat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Amraoti	...	...	1,199	...	...	1,199	...	...	...	...	...	...	...	...	...
Buldana	...	...	...	...	...	...	342	15,110	21	...	15,473	...	...	...	...
Yeshmal	...	...	...	...	...	...	8,806	20,282	2,860	...	31,957	...	...	...	...
Akola	...	...	...	...	...	...	...	3,432	1,216	...	4,648	...	...	...	...
Total	...	...	1,199	...	...	1,199	9,148	38,824	4,106	...	52,078	...	...	...	...
Total Berar excluding Nimar and Betul.	1,124	21,416	160	...	22,700	153,476	231,662	7,718	65,525	458,351	...	120,424	...	...	120,424
Grand Total figures of 1911-12	345	...	...	...	145	140,569	309,789	5,739	10,580	481,736	...	111,419	...	7,416	118,835
I.—Class "A" (Permanent Reserves).															
Nimar	...	...	...	...	...	...	14,871	256,614	1,459	...	272,944	...	...	...	...
Figures of 1911-12	...	...	...	...	...	...	9,124	249,846	150	...	259,120	...	...	...	...
Betul	...	...	21,151	...	...	21,151	13,774	83,627	...	...	97,401	...	...	...	...
Figures of 1911-12	...	...	22,021	...	...	22,021	29,551	107,787	...	...	137,338	...	...	...	...
Total Nimar and Betul	...	...	21,151	...	...	21,151	22,825	340,241	1,459	...	370,345	...	...	...	...
TOTAL BERAR CIRCLE	1,124	42,567	160	...	43,851	184,101	571,603	9,177	65,525	823,726	...	120,424	...	...	120,424
GRAND TOTAL CENTRAL PROVINCES AND NIMAR.	116,793	674,911	732	...	702,436	730,707	7,040,226	104,715	65,525	7,941,243	1,291	338,831	...	...	344,062

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in the "Reserve" column of this form it should be shown which of the figures entered in it are actuals

Timber and Fuel during the year 1912-13 and Agency of Exploitation.—(Concl'd.)

Miscellaneous.					Total Timber.					Fuel.					Total	Remarks.
Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.		
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	
..	..	..	..	..	..	..	..	..	211	..	10,900	..	..	10,900	11,197	
..	..	..	..	..	..	..	..	..	..	..	2,371	..	..	2,371	2,374	
..	..	..	..	..	..	..	..	..	105	..	1,130	..	..	1,130	4,498	
..	..	..	..	..	..	..	..	..	1,302	..	4,882	..	..	4,882	7,144	
..	..	..	..	..	..	..	..	..	..	..	50	..	..	50	8,668	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	31,159	34,181
..	
..	
..	
..	4,703	..	1,723	6,426	342	19,603	21	4,703	25,039	1,595	72,585	..	..	23,851	101,035	1,26,091
..	..	..	..	..	..	5,806	20,203	2,109	27,918	1,003	28,011	..	..	27,954	542,568	571,586
..	..	..	..	..	..	3,133	1,216	..	4,349	..	50,076	..	..	..	40,076	51,724
..	1,713	..	4,791	6,504	6,118	14,816	4,116	1,795	62,967	11,109	5,87,797	1,200	709,808	1,109,090	1,372,853	
28	2,259	7,00	9,511	16,924	14,628	79,790	9,627	71,163	618,109	203,083	2,155,109	1,060	1,771,019	1,776,174	1,354,191	
290	6,472	1,070	7,119	14,927	150,191	427,680	6,814	31,124	615,343	2,10,186	1,107,007	..	1,121,812	1,359,313	5,975,156	
2,404	24,709	11,110	..	35,819	17,275	281,123	13,578	..	111,176	25,110	879,412	13,150	..	1,042,042	1,351,218	
2,211	17,047	2,942	..	22,989	11,115	66,491	3,005	..	281,329	18,157	602,907	44,911	..	666,058	947,381	
1,481	55,677	11,471	..	67,148	13,255	16,115	11,471	..	187,193	27,603	348,111	170,707	..	556,813	742,996	
5,500	12,577	10,027	..	25,604	75,060	142,684	10,027	..	187,772	5,306	307,199	223,413	..	540,818	728,590	
3,885	8,0386	21,502	..	106,003	32,530	411,778	24,091	..	498,359	52,713	1,227,895	317,267	..	1,597,895	2,096,214	
3,073	87,674	23,341	8,819	119,834	187,158	822,568	32,678	74,704	1,116,768	256,699	1,382,984	320,337	1,374,019	5,131,029	6,490,797	
24,639	141,084	23,522	8,839	209,084	88,1430	8,197,322	128,969	74,361	9,288,085	1,207,212	23,408,577	1,141,747	1,974,019	27,131,555	36,419,640	

in producing it being entered in cubic feet solid, and which are only estimates, it being also noted in the latter case how the figures have been arrived at.

FORM No. 20.— [PRESCRIBED.]—*Outturn of Minor Forest Produce during the Forest year 1912-13.*

Division.	Description of produce.	Produce removed or utilized.										Remarks.
		By Government agency.		By purchasers.		By free-grants.		By right-holder.		Total.		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
1	2	3	4	5	6	7	8	9	10	11	12	13
All Divisions of the Northern Circle, Central Provinces.	NORTHERN CIRCLE		Rs.		Rs.		Rs.		Rs.		Rs.	
	I.—RESERVED FORESTS											
	Bamboos ... Tons	190	1,131	9,393	46,109	91	509	...	...	9,674	47,749	
	" Tons Commutation.	...	...	...	5,466	...	...	...	...	...	5,466	
	" ... Lease	...	...	867	4,640	...	...	...	...	867	4,640	
	Grazing .. ..	...	...	...	4,65,269	...	4,432	...	...	...	4,69,701	
	Grass ... Tons	1,975	56,657	8,481	4,642	821	693	...	...	11,277	61,992	
	" Commutation	...	...	1,100	4,736	...	...	...	...	1,100	4,736	
	" ... Lease	...	...	4,942	14,696	...	...	...	...	4,942	14,696	
	Harra ... Tons	754	17,670	...	...	...	...	...	...	754	17,670	
	" ... Lease	...	...	...	4,909	...	...	...	...	...	4,909	
	Lac .. Tons	2	619	...	...	...	...	...	...	2	619	
	" ... Lease	...	...	43	14,734	...	...	...	...	43	14,734	
	Mahua and Char. Tons	...	...	29	131	2	19	...	...	31	150	
	" ... Lease	...	...	49	4,301	...	...	...	...	49	4,301	
	Hides and Horns. Tons	3	96	...	...	...	...	...	...	3	96	
	" ... Lease	...	...	38	7,504	...	...	...	...	38	7,504	
	Other minor produce. Tons	80	170	8,706	4,307	4,833	880	...	...	13,619	5,357	
	" Commutation	...	...	2,204	24,197	...	...	...	...	2,204	24,197	
	" ... Lease	...	...	170	11,940	...	...	...	...	170	11,940	
	Mineral products. Tons	73	25	1,892	1,335	...	...	...	...	1,965	1,360	
	" ... Lease	...	...	181	493	...	...	...	...	181	493	
	Rush grass ... ..	...	...	...	437	...	...	...	...	...	437	
	Total .. ..	...	76,368	...	6,19,846	...	6,533	...	...	...	7,02,747	
All Divisions of the Southern Circle, Central Provinces.	SOUTHERN CIRCLE.											
	I.—RESERVED FORESTS.											
	Bamboos ... No	183,353	4,404	15,383,662	95,639	907,606	5,643	...	...	16,474,621	1,05,686	
	Grazing Animals	...	...	861,079	2,74,239	8,465	2,498	...	...	869,544	2,76,737	
	Fodder grass ... Tons	637	9,039	61,375	13,992	54	20	...	...	62,066	23,051	
	Thatching grass. "	457	893	99,943	63,301	2,118	999	...	...	102,518	65,193	
	Harra ... Tons	1	72	1,621	19,988	...	...	...	...	1,622	20,060	
	Lac ... "	4	1,255	264	8,820	...	...	...	...	268	10,075	
	Mahua and Char "	10	63	741	2,271	10	12	...	...	761	2,346	
	Hides and Horns. "	...	39	463	5,257	...	...	...	...	463	5,296	
	Other minor produce. "	65	1,926	24,858	16,776	772	1,147	...	...	25,695	19,849	
	Mineral products. Cft.	...	...	1,059,425	2,804	38,963	372	...	...	1,098,388	3,176	
	Total ... ..	...	17,691	...	5,03,087	...	10,691	...	...	...	5,31,469	

*This includes Rs. 5,400 realized on account of grass supplied to Bombay Presidency last year.

FORM No. 20.— [PRESCRIBED.]—*Outturn of Minor Forest Produce during the Forest year 1912-13.*—(Contd.)

Divi- non.	Description of produce	Produce removed or utilized.										Remarks.
		By Government agency		By purchasers		By free-grants.		By right-holders		Total.		
		Quantity	Value	Quantity.	Value.	Quantity.	Value	Quantity	Value.	Quantity.	Value.	
		1	4	5	6	7	8	9	10	11	12		13
	2											
			Rs		Rs		Rs.		Rs.		Rs.	
BERAR CIRCLE.												
I.—CLASS "A" (TIMBER AND GRASS RESERVE)												
Bamboos	... No	13 539	863	2,043,911	32,890	1,850	33	268,400	3,980	2,327,700	37,775	
Fodder grass	.. Tons	528	3,860	63,748	56,668	4	3	2,720	988	67,000	61,519	
Grazing cattle	No	...	...	316,244	1,17,423	1,343	277	14,749	3,046	332 336	1,20,746	
Rusa grass	... { Tons	30	40	860	1 146	...	...	...	...	890	1,185	
	Lease	...	...	..	12 409	...	...	...	...	..	12,409	
Rusa oil	... lbs	...	...	...	250	...	...	...	...	...	250	
Lac	... Seas	841	421	350	175	...	...	...	...	1,191	596	
Mineral products	Tons	12,970	94	71,816	1,226	443	86	377,585	542	4,62,814	1,948	
Animal products	{ Tons	342 lbs.	84	46—20 lbs.	247	...	...	...	...	46—362 lbs.	331	
	No	1,467	515	681	91	...	...	...	...	2,158	608	
Miscellaneous	.. Tons	186	836	23 333	6 510	26	29	570	1,225	3,115	8,600	
Minor produce	.. Lease	...	...	...	2,045	...	...	...	...	...	2,045	
Myrabolams	... ,	...	...	...	1,280	...	...	...	...	...	1,280	
- Total		..	6,713	...	2,32,371	...	438	...	9,781	..	2,49,293	
II — CLASS "B" (GRASS RESERVE)												
Bamboos	... No	...	...	4,208	1,441	...	...	...	...	4,208	1,441	
Fodder Grass	... Tons	412	3,285	41,634	43,991	5	9	...	..	42,051	47,285	
Grazing cattle	.. No	..	...	16,086	5 985	..	...	...	..	16,086	5,985	
Rusa grass	... { Tons	...	...	92	180	...	...	...	...	92	180	
	Lease	..	...	...	157	...	...	...	...	..	157	
Mineral products	Tons	...	...	20,361	263	300	19	...	...	23,361	282	
Animal products	..	...	...	lbs.	13	...	...	...	...	Tons lbs. 12—240	13	
Miscellaneous	.. Tons	..	...	468	1,090	...	...	...	...	468	1,090	
Total	..	...	3,285	...	53,120	...	28	...	...	...	56,433	
III — CLASS "C" (PASTURE GROUNDS).												
Bamboos	... No	...	...	125,592	1,167	...	...	...	...	125,592	1 367	
Fodder grass	... Tons	3	2	2,979	3,822	...	...	...	...	2,982	3,824	
Grazing cattle	... No	...	...	1,216,480	2,23,970	124,015	23,251	64,759	13,174	1,405,254	2,60,395	
Rusa grass	... Tons	...	...	2	4	...	...	...	...	2	4	
Rusa oil	... lbs.	...	...	138	69	...	...	...	...	138	69	

All Divisions of Berar proper.

FORM No. 20.— [PRESCRIBED.]—*Outturn of Minor Forest Produce during the Forest year 1912-13.—(Concl'd.)*

Division	Description of produce	Produce received or utilized.										Remarks.	
		By Government & Co.		By purchase		By free sale		By right holders.		Total.			
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.		
1	2	3	4	5	6	7	8	9	10	11	12	13	
All Divisions of Berar proper.	BERAR CIRCLE. (Contd.)		Rs.		Rs.		Rs.		Rs.				
	III.—CLASS "C" (PL. FOREST GROUNDS) —(Concl'd.)												
	Mineral products .. Tons	72	26	725,292	7,118	451	79	..	..	725,815 Tons. lbs.	7,223	
	Animal products .. " 6 lb	1	..	10	36	..	..	..	..	10-16	37	
	Miscellaneous .. No	..	..	..	46	6	..	..	..	46	6	
	Minor produce .. Tons	70	155	7,922	1,123	5	8	1,600	2,400	9,597	14,686		
	Total ..		184	..	2,18,315	..	23,338	..	15,574	..	2,87,411		
	Total Berar, excluding Nimar and Betul ..		10,182	..	5,33,806	..	23,794	..	25,355	..	5,93,137		
	I.—CLASS "A" (PL. MANENT RESERVES)												
	Nimar and Betul Divisions.	Bamboo .. No	45,272	152	4,681,399	30,535	78,990	556	1,778,567	31,243	
Fodder grass .. {		Tons	323	3,417	56,620	46,370	3,398	4,247	60,350	54,034	
		Lease	132	132	
Grazing cattle .. No		..	..	311,013	130,015	5,236	1,823	..	..	336,249	1,31,868	
Rusa grass .. {		Tons	2,580	4,515	2,580	4,515	
		Lease	14,731	14,731	
Halia .. " ..		..	41	..	360	..	..	..	..	..	671	
Mahua .. " ..		..	..	..	1,174	..	7	..	..	..	1,721	
Hides, horns and bones, {		Tons	1	49	1	49	
		Lease	..	12	..	3,155	3,167	
Minerals .. {		Cft	100	20	180,316	384	180,316	404	
		Tons	57	102	57	102	
.. {		Lease	315	315	
		Lac .. Lease	..	18	18	
Miscellaneous .. Tons		..	..	903	893	462	324	..	..	1,365	1,217	
Minor produce .. Lease		..	..	..	5,670	..	921	..	..	..	6,591	
Commulation .. ..		..	..	..	3,208	..	..	..	..	..	3,208	
Total ..	..	..	3,660	..	2,42,438	..	7,878	..	..	..	2,53,976	
III.—CLASS "B-I"— (AVAILABLE FOR AGRICULTURE.)													
	Grazing cattle .. No	..	..	1,682	274	..	..	..	..	1,682	274	
	Total ..	..	..	1,682	274	..	..	..	..	1,682	274	
	Total Nimar and Betul ..	..	3,660	..	2,42,712	..	7,878	..	..	..	2,54,250	
	Total Berar Circle ..	..	13,842	..	7,73,195	..	51,836	..	9,271	..	8,48,145	
	GRAND TOTAL C. P. AND BERARS.	..	1,07,591	..	18,96,128	..	69,660	..	9,272	..	20,82,361		

FORM NO. 21.—[PRESCRIBED].—Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally or otherwise disposed of, during the Forest year 1912-13.

Name of Division.					Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forests and sale depôts.
1					2	3	4	5	6
					C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
TIMBER.									
Mandla*	...	...	...	...	50,085	37,034	87,119	40,008	47,111
Jubbulpore-Narsinghpur (b)	...	...	...	...	5,510	24,300	29,810	7,952	21,858
Damoh	...	...	...	...	20,475	225,000	245,475	128,020	117,455
Saugor	...	...	...	...	2,594	22,440	25,034	19,909	5,125
Hoshangabad	...	...	...	...	924	17,643	18,567	16,967	1,600
Seoni	...	...	...	...	22,451	7,007	29,458	24,882	4,576
Chhindwara	...	...	...	...	44,409	25,957	70,366	39,339	31,027
Total					146,448	359,381	505,829	277,077	228,752
FUEL. (C. ft.)									
Mandla*	...	...	...	...	65,861	100	65,961	15,361	50,600
Jubbulpore-Narsinghpur (c)	...	...	...	...	6,096	6,810	12,906	7,046	5,860
Damoh	...	...	...	...	156,361	443,535	599,896	221,345	378,551
Saugor	...	...	...	...	6,795	16,337	23,132	19,490	3,642
Hoshangabad	...	...	...	...	1,410	22,792	24,202	24,202	...
Seoni	...	...	...	...	8,355	26,085	34,440	23,475	10,965
Chhindwara	...	...	...	...	3,070	23,262	26,332	6,783	19,549
Total					247,948	538,921	786,869	317,702	469,167
MINOR FOREST PRODUCE (VALUE).					Rs.	Rs.	Rs.	Rs.	Rs.
Mandla*	...	...	...	...	253	18,953	19,206	18,027	1,179
Jubbulpore-Narsinghpur (b)	...	...	...	...	5,517	203	5,720	5,574	146
Damoh	...	...	...	...	(a) 1,878	802	2,680	2,130	550
Saugor	...	...	...	...	2,148	412	2,560	2,469	91
Hoshangabad	...	...	...	...	6	54,769	54,775	54,769	6
Seoni	...	...	...	...	...	242	242	215	27
Chhindwara	...	...	...	...	44	987	1,031	87	944
Total					9,846	76,368	86,214	83,271	2,941
TIMBER.					C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Balaghat	...	...	...	...	6,926	13,046	19,972	12,728	7,244
Bhandara	...	...	...	...	2,688	12,238	14,926	9,765	5,161
Bilaspur	...	...	...	...	10,090	185,740	195,830	91,883	103,947
North-Chanda	...	...	...	...	23,686	25,432	49,118	40,758	8,360
South-Chanda	...	...	...	...	131,145	30,980	162,125	83,771	78,354
Nagpur-Wardha	...	...	...	...	3,958	13,970	17,928	12,409	5,519
Raipur	...	...	...	...	27,799	59,485	87,284	42,076	45,208
Total					206,292	340,891	547,183	293,390	253,711

* North-South Mandla excluding Dhanwahi Range.

(a) Due to inclusion of Rs. 998 on account of value of grass which was omitted from last year's balance.

(b) Includes Dhanwahi Range also.

FROM NO. 21.—[PRESCRIBED].—Account of Timber and other Produce cut or collected by Government Agency brought to Depôts, sold locally or otherwise disposed of, during the Forest year 1912-13—(Contd.)

Name of Division				Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forests and sale depôts.
1				2	3	4	5	6
FUEL (C. ft)				C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Balaghat	..	..	...	37,100	34,108	71,208	55,300	15,908
Bhandara	..	..	...	1,800	21,150	22,950	11,775	11,175
Bilaspur	..	..	...	112,125	2,827	114,952	113,452	1,500
North-Chanda	.	..	...	12,040	10,840	22,880	16,520	6,360
South-Chanda	..	..	..	735	3,150	3,885	3,480	405
Nagpur-Wardha	...	..	..	480	222,341	222,821	26,577	196,244
Raipur	...	..	..	97,248	117,176	214,424	153,624	60,800
Total Fuel				261,528	411,592	673,120	380,728	292,392
MINOR FOREST PRODUCE.				Rs.	Rs.	Rs.	Rs.	Rs.
Balaghat	..	..	...	633	825	1,458	839	619
Bhandara	...	..	...	12	1,430	1,442	1,427	15
Bilaspur	...	..	...	309	1,679	1,988	1,756	232
North-Chanda	...	..	...	680	2,835	3,515	3,012	503
South-Chanda	...	..	...	364	1,083	1,447	1,375	72
Nagpur-Wardha	...	..	...	77	5,183	5,260	4,526	734
Raipur	...	..	...	537	4,656	5,193	3,697	1,496
Total Minor Forest Produce				2,612	17,691	20,303	16,632	3,671
TEAK TIMBER.				C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Melghat	...	..	...	3,698	116,787	120,485	116,771	3,714
Amraoti	...	..	...	5	405	410	405	5
Bidana	...	..	...	3,002	3,155	6,157	2,522	3,635
Yeotmal	...	..	...	25,759	21,613	47,372	29,867	17,505
Akola	...	..	...	158	6,434	6,602	6,566	96
Nimar	...	..	...	8,721	14,871	23,592	15,868	7,724
Belal	...	..	...	14,928	13,774	28,702	15,236	13,466
Total Teak timber				56,281	177,039	235,320	187,115	48,205

FORM NO. 21.—[PRESCRIBED].—Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally or otherwise disposed of, during the Forest year 1912-13.—(Concl'd.)

Name of Division.				Balance at commencement of the year in forests and sale depôts	Received during the year.	Total.	Disposed of during the year	Balance in hand at close of the year in forests and sale depôts.
				2	3	4	5	6
				C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
TIMBER OTHER THAN TEAK								
Melghat	...	..	..	12	314	326	7	319
Amraoti	..	...	..	112	110	212	212	..
Buldana	...	.	..	1,628	869	2,497	460	2,037
Yeotmal	...	...	.	2,142	5,611	7,753	6,518	1,235
Akola	...	...	.	392	433	825	825	..
Nimar	.	...	...	2,680	2,404	5,084	2,330	2,754
Betul	..	...	...	36,959	1,481	38,440	37,339	1,101
Total Timber other than Teak				43,925	11,212	55,137	47,691	7,446
Total Timber				100,206	188,251	288,457	234,806	53,651
FUEL								
Melghat	..	...	...	105	3,456	3,561	3,545	16
Amraoti	.	...	...	704	29,834	30,538	23,438	7,100
Buldana	..	...	...	23,454	23,036	46,490	18,155	28,335
Yeotmal	...	...	..	140,584	92,110	232,694	177,582	55,112
Akola	...	.	...	7,920	82,128	90,048	68,623	21,425
Nimar	...	...	...	19,890	25,110	45,000	34,775	10,225
Betul	..	..	...	16,750	27,603	44,353	20,237	24,116
Total Fuel				209,407	283,277	492,684	346,355	146,329
MINOR FOREST PRODUCE.				Rs.	Rs.	Rs.	Rs.	Rs.
Melghat	..	...	...	278	1,653	1,931	1,799	632
Amraoti	...	...	...	117	604	721	591	130
Buldana	...	...	...	18	2,075	2,093	2,002	91
Yeotmal	...	...	...	650	4,416	5,066	4,658	408
Akola	...	...	..	36	1,777	1,813	1,813	..
Nimar	...	...	...	51	44,058	44,109	44,069	40
Betul	...	...	...	30	72	102	74	28
Total Minor Forest Produce				1,180	54,655	55,835	54,506	1,329
TOTAL BEBAR CIRCLE	{	Timber	Cft.	100,206	188,251	288,457	234,806	53,651
		Fuel	"	209,407	283,277	492,684	346,355	146,329
				309,613	471,528	781,141	581,161	199,980
		Total Minor Forest Produce		1,180	54,655	55,835	54,506	1,329
GRAND TOTAL CENTRAL PROVINCES AND BEBAR.	{	Timber	Cft.	452,916	888,523	1,341,469	805,273	536,196
		Fuel	"	718,883	1,233,790	1,952,673	1,044,785	907,898
		Minor Produce	Rs.	13,638	1,48,714	1,62,352	1,54,409	7,943

FORM NO. 22.—[PRESCRIBED]—Abstract showing the Value of Timber and other produce at Sale
Dépôts for the Forest year 1912-13.

Designation of land and other produce	On hand at commencement of the year			On hand at close of the year			Difference in value		Remarks
	No.	Cut	Value	No.	Cut	Value	In favour of the year.	Against the year	
1	2	3	4	5	6	7	8	9	10
			Rs.				Rs.	Rs.	
NORTHERN CIRCLE.									
Timber	...	146 148	13 356	...	228,757	25,811	10,455	...	
Fuel	..	247,948	4,172	...	460 167	10,936	6,464	...	
Minor Produce	..	.	*9,646	...		2 943	...	6,903	* Due to inclusion of Rs 998 on account of value of grass which was omitted from last year's form.
Total	29,374	...	...	39,390	10,016	..	
SOUTHERN CIRCLE									
Timber	..	43,298	51,749	...	14,226	14 374	...	37,375	
Fuel	..	330	11	...	108	7	...	4	
Minor produce	325	...	...	515	190	...	
Total	...	43,628	52,085	.	14,334	14,896	...	37,189	Net difference against the year Rs. 37,189.
BERAR CIRCLE.									
						Blank.			
GRAND TOTAL FOR CENTRAL PROVINCES AND BERAR.									
...	...	81,459	...	...	34,986	10,016	37,189	Net difference against the year Rs. 27,173.	

FORM NO. 23.—[PRESCRIBED].—Abstract showing the Value of Live and Dead-stock
for the Forest year 1912-13.

Description of Live and Dead-stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in value.		Remarks.
	No.	Value	No.	Value	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
NORTHERN CIRCLE.		Rs.		Rs.	Rs.	Rs.	
Elephants	...	6	5,626	6	4,950		676
Other live-stock	...	6	98	8	151	53	...
Dead-stock	1,73,111	...	1,30,425		*42,686
Total Northern Circle		...	1,78,835	...	1,35,526	...	43,309
SOUTHERN CIRCLE.							
Elephants	...	9	20,510	8	18,289	...	2,221
Other live-stock	...	14	375	12	350	25	.
Dead-stock	3,04,222	...	3,03,150	...	1,072
Total Southern Circle		...	3,25,107	...	3,21,789	...	3,318
BERAR CIRCLE.							
LIVE-STOCK.							
Elephants	...	5	6,942	15	6,696	..	246
Bullocks	...	6	187	8	309	122	...
Total		...	7,129	13	7,005	122	246
DEAD-STOCK.							
Buildings	1,53,757	...	1,69,089	15,332	...
Mathematical and other drawing instruments	4,582	...	4,323	..	259
Tools	10,209	...	9,553	...	656
Furniture	15,393	...	16,140	747	...
Tents	11,964	...	9,292	...	2,672
Miscellaneous	11,193	...	9,107	...	2,086
Total		...	2,07,098	...	2,17,504	10,406	6,573
Total Berar Circle		...	2,14,227	13	2,24,509	16,201	5,919
GRAND TOTAL C. P. AND BERAR		...	7,18,169	...	6,81,824	16,201	52,546
							Net difference in favour of the year = Rs. 10,282.
							Net difference against the year Rs. 35,345.

FORM NO. 24.—[PRESCRIBED].—Summary of Revenue and Expenditure

Budget Heads.	Dumoh Division.	Hoshangabad Division.	Jubbulpore Division.	Narsinghpur Division.
I	"	3	4	5
	Rs.	Rs.	Rs.	Rs.
NORTHERN CIRCLE.				
REVENUE.				
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—				
a. Timber	9,125	1,394	162	108
b. Firewood and charcoal	5,209	401	146	54
c. Bamboos	142	11	17	3
d. Sandal-wood	...	...	...	...
e. Grass and other minor produce	1,984	54,758	5,465	67
Total I	16,460	56,564	5,790	232
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FOREST BY CONSUMERS OR PURCHASERS—				
a. Timber	581	42,790	4,326	726
b. Firewood and charcoal	539	6,484	13,533	1,798
c. Bamboos	1,974	16,346	5,848	1,555
d. Grazing and fodder grass	59,420	28,270	32,416	18,993
e. Other minor produce	17,175	4,477	5,074	2,109
f. Forest stamps	...	...	...	...
g. Other items	...	...	...	...
h. Commutation fees	2,132	735	3,559	610
Total II	81,821	99,102	64,156	25,791
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE				
	...	197	59	...
Total III	...	197	59	...
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—				
a. Duty on foreign timber and other forest produce	...	...	...	...
b. Revenue from shared and private forest	...	...	...	...
Total IV	...	...	...	...
V.—MISCELLANEOUS—				
a. Fines and forfeitures	27	152	10	21
b. Refunds	27	2,000	16	10
c. Other sources	3,190	5,433	3,246	1,690
Total V	3,244	7,585	3,272	1,721
GRAND TOTAL REVENUE	1,01,525	1,63,448	73,277	27,744
A.—Conservancy and Works.				
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—				
a. Timber	2,264	56	...	...
b. Firewood and charcoal	4,805	...	...	...
c. Bamboos	101	1	3	...
d. Sandal-wood	...	...	...	...
e. Grass and other minor produce	2,395	42,546	1,390	45
Total A-I	9,565	42,603	1,393	45
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS.				
	4,320	5,815	3,723	1,746
Total A-II	4,320	5,815	3,723	1,746
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE				

Total A-III	...	...	...	...
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—				
a. Duty on foreign timber and other forest produce	...	...	...	...
b. Revenue from shared and private forests	...	...	...	...
Total A-IV	...	...	...	...
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT.				

Total A-V	...	...	...	...

FORM NO. 24 —[PRESCRIBED].—Summary of Revenue and Expenditure

Budget heads	Dumoh Division	Mohangabad Division	Jubbulpore Division	Narsinghpur Division
1	2	3	4	5
	Rs	Rs	Rs	Rs
NORTHERN CIRCLL —(Contd)				
<i>A—Conservancy and Works —(Contd)</i>				
VI—LIVE STOCK SERVICES, TOOLS AND PLANT—				
a Purchase of cattle	..	56	..	..
b Feed and keep of cattle	1,157	800	876	..
c Purchase of stock, tool and plant	..	1,329	149	298
Total A-VI	1,157	2,185	1,025	298
VII—COMMUNICATIONS AND BUILDINGS—				
a Roads and bridges	4,275	13,846	1,554	200
b Buildings	3,440	7,258	1,689	134
c Other works	1,002	852	330	8
Total A-VII	8,673	21,956	3,573	342
VIII.—ORGANIZATION, IMPROVEMENT AND EXTENSION OF FORESTS—				
a Demarcation	1,060	306	945	457
f Compensation for land and rights	..	20,300	..	..
c Surveys	..	..	..	..
d Working plans	..	..	..	..
e Sowing and planting	..	375	..	114
f Protection from fire	3,137	6,678	3,879	721
g Other works	1,364	3,679	852	162
Total A-VIII	5,561	31,398	5,678	1,454
IX.—MISCELLANEOUS —				
a Refunds	..	..	..	..
b Law charges	81	..	..	1
c Other charges	1,063	1,329	636	24
Total A-IX	1,144	1,329	636	25
TOTAL A.—CONSERVANCY AND WORKS	30,420	1,05,286	16,028	3,910
B.—Establishment.				
I.—SALARIES—				
a. Conservators	..	..	..	..
b. Superior officers	7,710	18,760	9,600	3,196
c. Subordinate forest and depot establishments	16,316	19,137	17,165	4,244
d. Office establishments	4,296	5,053	4,879	2,007
e. Deputation and special allowances	..	676	..	..
Total B-I	28,322	43,626	31,645	9,447
Bonus of half month's salary	42	10	..	..
II.—TRAVELLING ALLOWANCES—				
a. Conservators	..	..	..	..
b. Superior officers	1,173	2,374	935	517
c. Subordinate forest and depot establishments	1,151	3,024	2,553	594
d. Office establishments	267	473	253	106
Total B-II	2,591	5,871	3,741	1,217
III.—CONTINGENCIES—				
a. Stationery	52	108	35	30
b. Carriage of tents and records	781	1,305	959	564
c. Rents rates and taxes	74	25	94	..
d. Pay of police guards	..	..	..	..
e. Official postage	329	793	299	140
f. Sundries	1,374	900	868	511
Total B-III	2,610	3,136	2,255	1,245
TOTAL B —ESTABLISHMENTS	33,565	52,643	37,641	11,909
GRAND TOTAL OF EXPENDITURE	63,985	1,57,929	53,669	15,819
SURPLUS OR DEFICIIT	37,540	5,519	19,608	11,925

of the different Divisions during the Forest year 1912-13.—(Contd.)

Seroni Division	Deirction Division.	Chhindwara Division	Sauger Division.	Mandla Division	North Mandla Division	South Mandla Division.	Total.
6	7	8	9	10	11	12	13
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
...	...	...	...	...	...	...	56
36	609	642	963	542	.	128	4,596
53	360	284	1,249	407	.	140	5,426
89	969	976	2,212	949	.	268	10,078
908	..	3,623	1,560	708	15	347	26,986
1,938	...	1,162	2,127	1,015	960	2,301	22,032
1,512	900	492	801	123	60	175	6,255
4,158	900	5,277	4,488	1,846	1,035	2,845	55,273
1,175	...	37	1,696	1,754	635	228	8,205
...	..	...	...	...	...	...	20,360
...	..	35	...	...	...	...	35
...	...	5	...	...	...	...	5
64	...	8	...	...	...	...	1,247
6,118	...	1,070	4,677	2,900	583	2,365	33,028
590	...	717	2,540	264	45	427	10,640
7,947	...	2,752	9,454	5,009	1,263	3,094	73,610
...
36	...	6	...	...	...	...	205
981	41	317	77	4	...	...	6,747
1,017	41	323	937	1,341	44	34	6,952
21,464	1,910	18,070	1,014	1,345	44	34	2,55,164
...
...	17,884	...	...	...	...	...	17,884
7,325	1,645	13,200	17,648	13,816	1,110	5,520	99,540
17,129	154	15,852	21,659	17,587	3,627	3,551	1,36,922
4,550	10,588	4,576	4,403	4,419	758	1,200	46,789
...	...	...	1,225	...	.	...	1,501
29,504	30,271	33,618	44,945	35,822	5,495	10,331	3,03,036
3	...	8	...	8	...	...	71
...	1,221	...	...	...	...	...	1,221
1,024	137	1,248	2,596	1,281	326	1,395	13,016
2,874	2	1,848	3,174	2,275	494	632	18,621
505	604	478	273	162	127	199	3,447
4,403	1,964	3,584	6,043	3,718	947	2,226	36,305
...
44	30	52	49	25	1	4	430
670	1,107	716	1,259	765	288	758	9,172
48	34	146	15	28	...	14	478
...
469	757	443	613	734	97	219	4,898
1,563	1,610	1,618	1,679	842	80	214	11,259
2,794	3,538	2,973	3,615	2,394	466	1,209	26,237
35,704	35,773	40,195	54,603	41,942	6,908	13,766	3,65,649
51, 68	37,683	58,265	78,179	61,239	15,245	20,632	6,20,813
63,476	—37,650	1,03,898	50,181	99,232	—1,367	—322	2,52,042

FORM No. 24.—[PRESCRIBED].—Summary of Revenue and Expenditure

Budget Heads	Direction Division.	Balaghat Division.	Balaghat School Division.
1	2	3	4
	Rs.	Rs.	Rs.
SOUTHERN CIRCLE.			
REVENUE			
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
a. Timber	35	1,422	...
b. Firewood and charcoal	...	428	...
c. Bamboos	...	2	...
d. Sandal-wood	...	...	...
e. Grass and other minor produce	...	113	...
Total I	35	1,965	...
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—			
a. Timber	...	32,692	...
b. Firewood and charcoal	...	15,858	...
c. Bamboos	...	29,764	...
d. Grazing and fodder grass	...	32,545	...
e. Other minor produce	...	27,005	...
f. Other items	...	...	...
g. Commutation fees	...	4,589	...
Total II	...	1,44,453	...
III.—DRIFT AND WAIN WOOD AND CONFISCATED FOREST PRODUCE			
Total III	...	...	...
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—			
a. Duty on foreign timber and other forest produce	...	...	...
b. Revenue from shared and private forests	...	...	...
Total IV	...	...	...
V.—MISCELLANEOUS—			
a. Fines and forfeitures	...	...	...
b. Refunds	150	494	17
c. Other sources	224	8,653	512
Total V	374	9,147	529
GRAND TOTAL REVENUE	409	1,53,565	529
EXPENDITURE.			
A.—Conservancy and Works.			
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
a. Timber	...	86	...
b. Firewood and charcoal	...	48	...
c. Bamboos	...	...	...
d. Sandal-wood	...	...	...
e. Grass and other minor produce	...	91	...
Total A-I	...	225	...
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—			
Total A-II	167	9,740	...
III.—DRIFT AND WAIN WOOD AND CONFISCATED FOREST PRODUCE			
Total A-III	...	...	...
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—			
a. Duty on foreign timber and other forest produce	...	...	...
b. Revenue from shared and private forest	...	...	...
Total A-IV	...	...	...
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT—			
Total A-V	...	...	...

FORM NO. 24.—[PRESCRIBED].—Summary of Revenue and Expenditure

Budget Heads.	Direction Division.	Balaghat Division.	Balaghat School Division.
1	2	3	4
	Rs.	Rs.	Rs.
SOUTHERN CIRCLE.—(Concl'd)			
EXPENDITURE.—(Concl'd.)			
A.—Conservancy and Works.—(Concl'd)			
VI.—LIVE-STOCK SERVICES, TOOLS AND PLANT—			
a. Purchase of cattle ...	207	1,091	180
b. Food and keep of cattle ...	474	972	1,172
c. Purchase of stores, tools and plant ...			
Total A-VI	681	2,063	1,352
VII.—COMMUNICATIONS AND BUILDINGS—			
a. Road and bridges ...		10,637	348
b. Building ...		5,803	2,236
c. Other work ...	727	1,616	199
Total A-VII	727	18,116	2,783
VIII.—ORGANIZATION, IMPROVEMENT AND EXTENSION OF FORESTS—			
a. Fencing ...		1,163	
b. Cost of Forest Settlements; compensation for land and rights ...		6,028	
c. Survey ...			
d. Working-plans ...	10	54	
e. Sowing and planting ...	175	149	603
f. Protection from fire ...		6,508	
g. Other works ...		2,235	
Total A-VIII	194	16,137	603
IX.—MISCELLANEOUS—			
a. Law charges ...		89	
b. Other charges ...	133	1,774	351
Total A-IX	133	1,863	351
TOTAL A—CONSERVANCY AND WORKS	1,002	48,144	5,089
B.—ESTABLISHMENT.			
I.—SALARIES—			
a. Conservators ...	20,225		
b. Superior officers ...	6,749	23,507	5,284
c. Subordinate forest and depot establishments ...	121	20,216	2,417
d. Office establishments ...	10,165	7,265	1,187
e. Deputation and special allowances ...	3,844		2,561
f. Exchange compensation allowance ...			
Total B-I	41,104	50,988	11,449
II.—TRAVELLING ALLOWANCES—			
a. Conservators ...	2,019		
b. Superior officers ...	332	2,540	486
c. Subordinate forest and depot establishments ...	103	3,021	2,000
d. Office establishments ...	600	797	116
Total B-II	3,054	6,358	2,602
III.—CONTINGENCIES—			
a. Stationery ...	15	63	20
b. Carriage of tents and records ...	1,043	2,922	594
c. Rents, rates and taxes ...	124	75	90
d. Pay of police guards ...			
e. Official postage ...	812	826	50
f. Sundries ...	1,069	2,083	756
Total B-III	3,063	5,969	1,310
TOTAL B.—ESTABLISHMENTS	47,221	63,315	15,361
GRAND TOTAL OF EXPENDITURE	49,123	1,11,459	20,650
SURPLUS OR DEFICIT	-48,714	42,106	-20,121

of the different Divisions during the Forest year 1912-13.—(Contd.)

Bhandara Division.	Bilaspur Division.	North Chanda Division.	South Chanda Division.	Nagpur-Wardha Division.	Raipur Division.	Total.
5	6	7	8	9	10	11
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
...	...	...	25	...	...	25
589	597	1,022	1,773	391	1,026	6,876
418	500	307	851	1,280	1,634	7,608
1,007	1,097	1,329	2,649	1,671	2,650	14,509
2,137	5,140	5,762	4,541	3,613	6,210	38,388
4,336	3,630	2,747	3,925	4,833	4,747	32,317
3,809	669	1,441	3,259	1,300	2,303	15,323
10,282	9,439	9,950	11,725	9,746	13,260	86,028
331	125	2,739	1,340	1,644	971	8,313
...	...	...	...	...	25	6,053
...	364	118	623	7	...	7
18	56	50	668	274	180	1,632
4,810	4,573	11,457	7,636	164	...	1,881
173	148	1,597	3,824	4,111	8,959	48,054
5,332	5,266	15,961	14,091	469	364	8,810
5	3	2	...	319	46	464
1,141	460	3,478	1,263	1,612	1,520	11,721
1,146	463	3,480	1,263	1,911	1,566	12,196
22,659	21,522	41,700	45,114	34,705	37,041	2,57,870
...
5,056	8,450	9,808	9,850	12,453	18,210	30,225
12,449	10,568	22,623	14,351	18,883	19,253	99,167
4,459	4,570	6,843	5,943	5,757	7,349	1,20,881
...	...	515	344	...	...	53,538
...	10	18	...	11	...	7,264
21,064	23,598	39,807	30,488	37,104	44,812	39
...
1,372	1,585	2,575	2,394	1,910	3,481	2,019
1,881	1,923	2,591	2,293	2,304	2,183	16,675
312	263	838	548	412	572	18,299
3,565	3,771	6,004	5,235	4,626	6,236	4,458
28	32	67	58	41	50	374
860	876	1,889	1,363	1,726	2,108	13,381
93	374	30	70	110	125	1,091
...
356	466	857	735	530	719	5,351
746	1,149	1,172	2,822	1,095	1,771	12,663
2,083	2,897	4,015	5,048	3,502	4,773	32,860
27,612	30,266	49,826	40,771	45,232	55,821	3,75,625
50,271	51,788	91,526	85,885	79,237	92,862	6,33,501
60,900	17,702	66,508	85,133	94,782	21,616	3,19,912

FORM NO. 24.—[PRESCRIBED].—Summary of Revenue and Expenditure

Budget Heads	Direction Division,	Archa Division,	Amritot Division
1	2	3	4
	Rs	Rs	Rs
BERAR CIRCLE			
REVENUE			
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
a. Timber	...	672	52
b. Firewood and charcoal	...	2,586	2,440
c. Bamboos	...	602	180
d. Sandal-wood
e. Grass and other minor produce	...	1,185	286
Total I	...	5,045	2,958
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—			
a. Timber	...	7,376	4,207
b. Firewood and charcoal	...	17,411	11,068
c. Bamboos	...	66	1
d. Grazing and fodder grass	...	78,705	1,04,057
e. Other minor produce	...	4,570	11,309
f. Other items
g. Commutation fees
Total II	...	1,08,128	1,30,637
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE			
Total III	...	2	17
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—			
a. Duty on foreign timber and other forest produce
b. Revenue from shared and private forest
Total IV
V.—MISCELLANEOUS—			
a. Fines and forfeitures	...	237	99
b. Refunds	...	12	25
c. Other sources	...	1,516	5,217
Total V	...	1,528	5,341
GRAND TOTAL REVENUE	...	1,528	1,18,705
A.—Conservancy and Works.			
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
a. Timber
b. Firewood and charcoal	533
c. Bamboos	60
d. Sandal-wood	...	133	...
e. Grass and other minor produce	...	786	...
Total A-I	...	919	593
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS.			
Total A-II	...	6,234	10,570
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE			
Total A-III	...	6,234	10,570
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—			
a. Duty on foreign timber and other forest produce
b. Revenue from shared and private forests
Total A-IV
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT.			
Total A-V

FORM NO. 24.—[PRESCRIBED].—Summary of Revenue and Expenditure

Budget Heads	Director Division.	Akola Division.	Amraoti Division.
1	2	3	4
	Rs.	Rs.	Rs.
BERAR CIRCLE —(Concl'd)			
A.—Conservancy and Works —(Concl'd)			
VI.—LIVE-STOCK, STORES, TOOLS AND PLANT —			
a. Purchase of cattle ..	...	...	...
b. Feed and keep of cattle ..	840	...	...
c. Purchase of stores, tools and plant ..	122	865	330
Total A-VI ..	962	865	330
VII.—COMMUNICATIONS AND BUILDINGS—			
a. Roads and bridges ..	...	5,919	1,517
b. Buildings ..	...	2,894	3,422
c. Other works ..	14	1,642	326
Total A-VII ..	14	10,455	5,265
VIII.—ORGANIZATION, IMPROVEMENT AND EXTENSION OF FORESTS—			
a. Demarcation ..	...	755	1,077
b. Compensation for land and rights ..	...	...	...
c. Surveys ..	208	20	...
d. Working-plans ..	...	16	...
e. Sowing and planting ..	1	935	312
f. Protection from fire ..	...	1,427	1,066
g. Other works ..	...	2,486	109
Total A-VIII ..	209	5,639	2,564
IX.—MISCELLANEOUS—			
a. Law charges ..	...	...	53
b. Other charges ..	101	677	1,066
Total A-IX ..	101	677	1,119
TOTAL A—CONSERVANCY AND WORKS ..	1,285	24,789	20,441
B.—ESTABLISHMENTS.			
I.—SALARIES—			
a. Conservators ..	18,366	...	...
b. Superior officers ..	...	5,916	5,586
c. Subordinate forest and depôt establishments ..	3,252	8,806	8,667
d. Office establishments ..	9,257	4,630	4,643
e. Deputation and special allowances ..	338	—7	...
f. Bonus of half month's pay ..	...	10	...
Total B-I ..	31,213	19,355	18,896
II.—TRAVELLING ALLOWANCES—			
a. Conservators ..	1,722	...	...
b. Superior officers ..	...	1,181	1,194
c. Subordinate forest and depôt establishments ..	137	1,901	1,444
d. Office establishments ..	590	311	321
Total B-II ..	2,449	3,393	2,959
III.—CONTINGENCIES—			
a. Stationery ..	406	69	33
b. Carriage of tents and records ..	1,140	881	600
c. Rents, rates and taxes ..	...	359	148
d. Pay of police guards ..	...	...	...
e. Official postage ..	835	379	416
f. Sundries ..	1,229	1,136	589
Total B-III ..	3,700	2,824	1,786
TOTAL B.—ESTABLISHMENTS ..	37,362	25,572	23,641
GRAND TOTAL OF EXPENDITURE ..	38,648	50,361	44,082
SURPLUS OR DEFICIT ..	-37,120	68,344	94,271

of the different Divisions during the Forest year 1912-13.—(Concl'd.)

Betul Division.	Buldana Division.	Melghat Division.	Nimar Division.	Ycotmal Division.	Total.	Grand Total Central Provinces and Berar.
8	6	7	8	9	10	11
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
...	...	...	140	...	140	221
716	...	1,376	1,044	851	4,827	16,299
505	330	395	1,140	509	4,106	17,230
1,221	330	1,771	2,324	1,360	9,163	33,750
3,325	9,112	3,920	5,732	2,390	31,924	97,298
2,262	810	3,849	8,042	10,149	31,428	85,777
843	1,688	561	5,327	4,223	14,624	36,202
6,430	11,610	8,330	19,101	16,771	77,976	2,19,277
1,542	692	462	1,778	671	6,977	21,585
149	1,562	13,996	...	...	15,707	42,120
51	...	491	1	50	821	863
...	955	738	78	55	1,842	3,479
6	1,004	127	95	674	3,154	6,284
7,168	1,853	7,167	11,726	3,284	33,691	1,14,773
1,686	1,884	5,009	1,891	3,893	16,958	36,408
10,602	7,950	27,990	15,569	8,627	79,150	2,27,512
...
1,054	985	1,134	351	85	489	1,158
1,054	985	1,134	1,313	1,433	7,773	25,242
29,274	26,837	43,081	1,664	1,518	8,222	27,400
...
11,169	8,411	21,627	13,408	15,056	18,366	56,475
23,931	13,425	20,501	32,404	24,161	81,173	2,80,080
5,670	5,117	5,700	8,558	6,165	1,35,547	3,93,350
283	...	1,155	...	18	49,740	1,50,067
49	...	6	3	...	1,787	10,952
41,102	26,953	49,329	54,367	45,400	62	172
...
1,257	1,061	1,988	1,831	2,787	1,722	4,962
4,228	2,404	2,867	6,657	2,938	11,299	40,990
413	433	495	1,249	585	22,576	59,496
5,898	3,898	5,350	9,737	6,310	4,397	12,302
63	55	108	129	40	993	1,797
1,200	720	1,323	1,850	1,243	9,017	31,570
68	336	148	52	...	1,111	2,680
...
543	776	295	654	778	4,676	14,925
1,141	1,594	826	952	1,409	8,876	32,798
3,075	3,481	2,700	3,637	3,470	24,673	63,770
50,975	34,332	57,439	67,741	55,180	351,342	10,92,616
79,349	16,169	1,00,520	1,61,009	93,279	6,28,417	18,82,731
71,029	47,900	43,375	1,14,260	1,64,546	5,67,205	+ 12,39,157

FOREST DEPARTMENT OF THE

Account Current for the

RECEIPTS.

	Amount.		Amount.	
	Rs. a. p.		Rs. a. p.	
CASH BALANCE	372	0 0
VIII.—ASSESSED TAXES		
Income Tax—Deductions from salaries	3,085	7 10
REVENUE DURING THE FOREST YEAR 1912-13.	9,72,852	13 5
XII —INTEREST	248	6 8
OTHER CIVIL HEAD	14	2 8
S. B Deposits—Bank Accounts—General Provident Fund	3,919	5 0
Personal Deposits—Lady Minto's Nursing Association Fund	44	0 0
FOREST DEPOSITS	688	8 0
ADVANCES RECOVERABLE		
House Building Advances	137	8 0
Forest Advances	4,14,233	8 11
Objection Book Advances	6,878	1 3
Hutting Advances on account of Plague.
Motor car Advances	1,333	6 0
SUSPENSE ACCOUNT	1	0 0
CASH REMITTANCES—LOCAL—FOREST REMITTANCES.—		
Discount on sale of Forest Stamps	2,554	0 9
Forest cheques drawn	6,00,648	4 5
Revenue Remittances written back	72,175	11 7
Inter Divisional Transfers	4,768	10 2
P. W. Remittances, Cash Remittances III, Other Remittances B. Items adjustable by Civil.	0	10 0
Total		
EXCHANGE ACCOUNT WITH OTHER GOVERNMENTS.—		
Account between India and Central Provinces		
III.—Items adjustable by India Forest Officers Provident Funds	2,977	8 0
General Provident Funds Imperial	5,301	15 3
III.—Items adjustable by India—Miscellaneous	1	7 3
IV.—Items adjustable by C. P.—Miscellaneous	2,255	13 5
Account between Central Provinces and Bengal		
III.—Items adjustable by Central Provinces		
IV.—Items adjustable by Bengal		
Account between Central Provinces and Bombay		
III.—Items adjustable by Central Provinces—Miscellaneous	2,843	1 6
IV.—Items adjustable by ————		
Account between ———— and ————		
Account between Central Provinces and Military Supply Account		
III.—Items adjustable by Central Provinces	1,183	5 10
IV.—Items adjustable by Military—Miscellaneous	2,300	0 0
Account between Central Provinces ————		
III.—Items adjustable by Central Provinces		
IV.—Items adjustable by Bombay—Miscellaneous	66	15 6
Total		
INTER-DEPARTMENTAL TRANSFERS.—		
P. W. Department, Ordinary Branches		
" " Railway Branches		
Military " Northern Circle		
" " Eastern "		
" " Western "		
" " Secunderabad Division		
" " Burma Division		
" " Military Supply		
Post and Telegraph Department	695	6 2
Marine Department		
Total		
GRAND TOTAL	21,01,581	1 7

[PRESCRIBED].

NORTHERN CIRCLE, CENTRAL PROVINCES.

Forest year 1912-13.

PAYMENTS.

			Amount	Amount.
			Rs a. p.	Rs. a p.
I.—REFUNDS AND DRAWBACKS				
Assessed Taxes	511 5 7
EXPENDITURE DURING THE FOREST YEAR 1912-13...			...	6,20,812 8 5
OTHER CIVIL HEADS			...	14 9 3
S. B Deposits—Bank Accounts General Provident Fund	363 2 3
FOREST DEPOSITS			...	678 0 0
ADVANCES RECOVERABLE		
House Building Advances	300 0 0
Forest Advances	4,19,606 5 0
Objection Book Advances	8,128 12 1
Hutting Advances on account of Plague	10 0 0
SUSPENSE ACCOUNT			...	28 0 0
CASH REMITTANCES- LOCAL—FOREST REMITTANCES		
Cash Remittances P W. Remittances A by P W. D.	885 4 9
Cash Remittances " R by Civil	4 10 8
Remittances to Treasuries	9,20,503 7 1
Unpaid cheques written back	227 10 4
Inter-Divisional Transfers	1,996 4 5
Forest stamps adjusted	26,501 14 0
Total		
EXCHANGE ACCOUNT WITH OTHER GOVERNMENTS —				
Account between India and Central Provinces
III.—Items adjustable by India	350 0 0
IV.—Items adjustable by Central Provinces	15 0 0
Account between Central Provinces and Burma
III.—Items adjustable by Central Provinces
IV.—Items adjustable by Burma	600 0 0
Account between Central Provinces and U. P. of Agra and Oudh
III.—Items adjustable by Central Provinces	13,957 11 9
IV.—Items adjustable by ————
Account between Central Provinces and Military Supply
III.—Items adjustable by Central Provinces
IV.—Items adjustable by Military Miscellaneous Payments	2,300 0 0
Account between Central Provinces and Bombay
III.—Items adjustable by Central Provinces
IV.—Items adjustable by Bombay	80,743 15 5
Account between Central Provinces and Military Western Circle IV. Items adjustable by Military—Miscellaneous	3,030 0 0
Total		
INTER-DEPARTMENTAL TRANSFERS—				
P. W. Department, Ordinary Branches
" " Railway Branches
Military " Northern Circle
" " Eastern "
" " Western "
" " Secunderabad Division
" " Burma Division
" " Military Supply
Post and Telegraph Department
Marine Department
Total		
CASH BALANCE		
GRAND TOTAL			...	21,01,581 1 7

FOREST DEPARTMENT OF THE

Account Current for the

RECEIPTS.

	Amount.			Amount.		
	Rs. a. p.			Rs. a. p.		
CASH BALANCE
VIII.—ASSESSED TAXES
Income Tax—Deductions from Salaries	3,049	8	3
REVENUE DURING THE MONTH	9,534	13	0
XII.—INTEREST	1,023	5	0
OTHER CIVIL HEADS—(As detailed below) .—
S. B.—Deposits—Bank Accounts—General Provident Fund Provincial	6,280	15	0
XVI-B.—Law and Justice, Jails, Jail Manufactures, Central Jail	28	10	0
PERSONAL DEPOSITS—Lady Minto's Nursing Association Fund	61	0	0
XXXI—Civil Works, Provincial Buildings and Roads	2,225	8	0
FOREST DEPOSITS	515	2	6
ADVANCES RECOVERABLE—
House Building Advances	761	4	0
Forest Advances	7,564	58	12
Objection Book Advances	5,637	8	0
Hutting Advances on account of Plague	180	0	0
Taxes from Municipality	38	11	4
SUSPENSE ACCOUNT
CASH REMITTANCES—LOCAL—FOREST REMITTANCES.—
Forest cheques drawn	6,03,569	12	10
Revenue Remittances written back	13,333	1	8
Inter-Divisional Transfers	4,833	12	5
Discount on Forest Stamps	2,824	11	6
P. W. Department Remittances, (A) Items adjustable by Public Works Department	—335	8	0
" " (B) " " Civil	184	3	5
Total
EXCHANGE ACCOUNT WITH OTHER GOVERNMENTS.—
Account between India and Central Provinces
III.—Items adjustable by India (General Provident Fund Imperial)	7,711	7	0
(Forest Officers' Provident Fund)	1,170	0	0
IV.—Items adjustable by Central Provinces
Account between Central Provinces and Bengal
III.—Items adjustable by Central Provinces
IV.—Items adjustable by Bengal
Account between— and—
III.—Items adjustable by Central Provinces
IV.—Items adjustable by—
Account between— and—
Account between Central Provinces and Military
III.—Items adjustable by Military Supply Account
Items adjustable by Civil
IV.—Items adjustable by—	1,352	2	0
Account between Central Provinces and—
III.—Items adjustable by Central Provinces
IV.—Items adjustable by—
Total
INTER-DEPARTMENTAL TRANSFERS—
P. W. Department Ordinary Branches
" " Railway Branches
Military " Northern Circle
" " Eastern "
" " Western "
" " Secunderabad Division
" " Burma Division
" " Military Supply
Post and Telegraph Department	679	1	7
	21	8	10
	5	4	9
Total
GRAND TOTAL	23,72,838	5	4

[PRESCRIBED].—(Contd.)

SOUTHERN CIRCLE, CENTRAL PROVINCES.

Forest year 1912-13.

PAYMENTS.

			Amount.			Amount.		
			Rs. a. p.			Rs. a. p.		
I.—REFUNDS AND DRAWBACKS	3,992	5	5
EXPENDITURE DURING THE MONTH	6,13,501	9	9
OTHER CIVIL HEADS (As detailed below) :—								
S. B. Deposits—Bank Accounts—General Provident Fund Provincial	404	5	9
FOREST DEPOSITS	186	8	0
ADVANCES RECOVERABLE
House Building Advances	1,720	0	0
Forest Advances	7,45,755	12	0
Objection Book Advances	5,587	2	8
Hutting Advances on account of Plague	89	0	0
SUSPENSE ACCOUNT
CASH REMITTANCES—LOCAL—FOREST REMITTANCES—						8,93,210	7	10
Remittances to Treasuries
Unpaid cheques written back	9,697	5	1
Inter-Divisional Transfers	9,450	15	4
Cash Remittances III, Other Remittances (A) Items adjustable by P. W. Department...	17	9	6
Do. Do. (B) Items adjustable by Civil Department	44,682	14	3
Forest Stamps adjusted
Total
EXCHANGE ACCOUNTS WITH OTHER GOVERNMENTS.								
Account between India and Central Provinces	3,750	0	0
III.—Items adjustable by India	13,320	0	0
IV.—Items adjustable by Central Provinces
Account between Central Provinces and Bengal
III.—Items adjustable by Central Provinces	258	1	7
IV.—Items adjustable by Bengal—Miscellaneous
Account between Central Provinces and—
III.—Items adjustable by Central Provinces	2,000	0	0
IV.—Items adjustable by Military—Miscellaneous Payments
Account between Central Provinces and—
III.—Items adjustable by Central Provinces and Bombay	860	14	0
IV.—Items adjustable by Bombay—Miscellaneous
Account between Central Provinces and—
III.—Items adjustable by Central Provinces
IV.—Items adjustable by—
Total
INTER-DEPARTMENTAL TRANSFERS—								
P. W. Department, Ordinary Branches
" " Railway Branches
Military " Northern Circle
" " Eastern "
" " Western "
" " Secunderabad Division
" " Burma Division
" " Military Supply
Post and Telegraph Department
Marine Department
Total	23,68,574	15	2
CASH BALANCE	4,263	6	2
GRAND TOTAL	23,72,838	5	4

FOREST DEPARTMENT OF THE
Account Current for the

RECEIPTS.

	Amount,		Amount,	
	Rs. a. p.		Rs. a. p.	
CASH BALANCE. ...	...	...	...	...
VIII.—ASSESSED TAXES ...	...	...	...	...
Income Tax—Deductions from salaries ...	...	...	2,495 10 3	...
REVENUE DURING THE YEAR ...	...	...	11,95,622 6 1	...
XII.—INTEREST ...	...	...	330 4 8	...
General Provident Fund Provincial ...	...	...	6,571 2 3	...
OTHER CIVIL HEADS—(As detailed below) ...	...	...	...	...
XXXI.—Provincial Civil Works. In charge of P. W. Officers. Rent of Buildings .	...	...	12 2 2	...
FOREST DEPOSITS. ...	...	...	4,289 7 10	...
PERSONAL DEPOSITS—Lady Minto's Nursing Fund Transaction ...	...	...	22 10 3	...
ADVANCES RECOVERABLE ...	47 11 8	...	...	...
Hutting Advances ...	5,72,031 4 3	...	...	...
Forest Advances ...	6,123 7 10	...	5,78,208 7 9	...
Objection Book Advances ...	...	...	37 8 0	...
SUSPENSE ACCOUNT ...	...	...	...	...
PROVINCIAL ADVANCES AND LOAN ACCOUNT ...	...	...	...	...
TAKAVI ADVANCES ...	...	...	...	...
CASH REMITTANCES LOCAL—FOREST REMITTANCES.	...	...	...	...
Forest cheque drawn ...	5,83,229 1 4	...	...	...
Revenue Remittances written back ...	2 0 0	...	...	...
Inter divisional Transfers ...	3,437 0 0	...	...	...
Discount on sale of Forest Stamps ...	1,603 1 6	...	...	...
Total ...	...	...	5,88,271 2 10	...
EXCHANGE ACCOUNT WITH OTHER GOVERNMENTS.	...	...	...	...
Account between India and Central Provinces ...	...	...	...	...
III.—Items adjustable by India ...	8,330 12 0	...	...	...
IV.—Items adjustable by Central Provinces ...	4,276 15 2	...	...	...
Account between Central Provinces and Bengal ...	...	...	...	...
III.—Items adjustable by Central Provinces ...	...	...	...	...
IV.—Items adjustable by Bengal ...	...	...	...	...
Account between Central Provinces and Bombay ...	...	...	...	...
III.—Items adjustable by Central Provinces ...	3,262 14 3	...	...	...
IV.—Items adjustable by— ...	...	...	...	...
Account between Central Provinces and— ...	...	...	...	...
III.—Items adjustable by Central Provinces— ...	...	...	...	...
IV.—Items adjustable by— ...	...	...	...	...
Account between Central Provinces and— ...	...	...	...	...
III.—Items adjustable by Central Provinces ...	...	...	...	...
IV.—Items adjustable by— ...	...	...	...	...
Total ...	...	...	15,870 9 5	...
INTER-DEPARTMENTAL TRANSFERS—	...	...	...	...
P. W. Department, Ordinary Branches ...	...	...	...	...
" " Railway Branches ...	...	...	...	...
Military " Northern Command ...	...	...	...	...
" " Eastern ...	...	...	...	...
Account between Central Provinces and Western Circle ...	36 0 0	...	...	...
" " Secunderabad Division ...	1,148 5 4	...	...	...
" " Burma Division ...	...	...	...	...
Account between Central Provinces and Military ...	...	...	...	...
Military Supply Account (III)—Items Adjustable by Civil ...	...	...	...	...
Telegraph Department ...	...	...	...	...
Post Office Department ...	667 14 0	...	...	...
Marine Department ...	...	...	...	...
Total ...	...	...	1,872 3 4	...
GRAND TOTAL ...	...	...	23,93,604 10 10	...

[PRESCRIBED].—(Concl'd.)

CENTRAL PROVINCES, BERAR CIRCLE.

Forest year 1912-13.

PAYMENTS.

		Amount		Amount.	
		Rs	a. p.	Rs.	a. p.
1.—REFUNDS AND DRAWBACKS	...	...	...	251	0 3
EXPENDITURE DURING THE YEAR	...	...	...	6,28,416	15 3
OTHER CIVIL HEADS—(As detailed below) —	...	...	...	...	...
32.—Miscellaneous charges for attending Departmental Examination	...	...	...	46	8 0
General Provident Fund Provincial	...	...	...	1,482	14 10
FOREST DEPOSITS	...	...	...	4,131	5 6
PERSONAL DEPOSITS—Lady Minto's Nursing Fund Transaction	...	...	...	...	...
ADVANCES RECOVERABLE	...	...	...	...	...
Forest Advances	...	5,51,456	0 10	...	...
Objection Book Advances	...	6,542	2 0	...	...
Hutting Advances	...	10	0 0	5,58,008	2 10
SUSPENSE ACCOUNT	...	...	...	239	4 6
	
PROVINCIAL ADVANCE AND LOAN ACCOUNT	...	...	...	...	...
Takavi Advances	...	...	...	...	...
CASH REMITTANCES—LOCAL—FOREST REMITTANCES.	...	...	...	...	...
Remittances to Treasuries	...	11,21,575	6 1	...	...
Unpaid cheques written back	...	500	0 0	...	...
Inter Divisional Transfers	...	4,977	0 0	...	...
Forest Stamps adjusted	...	23,358	7 9	...	...
Total	...	...	...	11,50,410	13 10
EXCHANGE ACCOUNT WITH OTHER GOVERNMENTS	...	...	...	...	...
Account between India and Central Provinces	...	...	...	...	...
III.—Items adjustable by India	...	750	0 0	...	...
IV.—Items adjustable by Central Provinces	...	40	0 0	...	...
Account between Central Provinces and Bengal	...	...	...	...	...
III.—Items adjustable by Central Provinces	...	...	...	...	...
IV.—Items adjustable by Bengal	...	...	...	...	...
Account between Central Provinces and Bombay	...	...	...	...	...
III.—Items adjustable by Central Provinces	...	...	...	...	...
IV.—Items adjustable by Bombay	...	48,635	15 10	...	...
Account between Central Provinces and—	...	...	...	...	...
III.—Items adjustable by Central Provinces	...	...	...	...	...
IV.—Items adjustable by—	...	...	...	...	...
Total	...	...	...	49,425	15 10
INTREDEPARTMENTAL TRANSFERS—	...	...	...	...	...
P. W. Remittances	...	...	...	...	...
III.—Other Remittances (A) Items adjusted by P. W. Department	...	...	...	1,189	10 0
P. W. Department, Ordinary Branches	...	...	...	...	...
" " Railway Branches	...	...	...	...	...
Military Department, Northern Command	...	...	...	...	...
" " Eastern " "	...	...	...	...	...
" " Western " "	...	...	...	...	...
" " Secunderabad Division	...	...	...	...	...
" " Burma Division	...	...	...	...	...
Telegraph Department	...	...	...	...	...
Post Office Department	...	...	...	...	...
Marine Department	...	...	...	...	...
Total	...	...	...	...	...
GRAND TOTAL	...	...	...	23,93,604	10 10

ANNUAL FORM NO. 26.—Revenue received and outstandings on account of Revenue during 1912-13.

Division	Particulars	Out standing at commencement of year	Value of sales and other revenue during year.	Refd	Amount realized during year.	Balance due to Department at end of year.	Remarks
1	2	3	4	5	6	7	8
NORTHERN CIRCLE.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Column 6 includes the following amounts— A—Amounts deducted in correction of entries accounts B—Amounts written off as irrecoverable. A. B. Rs. a. p. Rs. a. p. (a) 170 15 9 73 5 3 (b) 5 0 0 74 4 3 (c) 293 10 0 12 0 0 (d) 18 0 0 3 7 8 (e) 497 10 6 (f) 25 5 0 21 2 9 (p) 107 11 6 130 8 8 1,116 4 9 614 12 2
Mandla (a) (North and South including Dharwar Range)		7,712 11 3	7,07,471 9 8	2,15,107 5 4	1,93,112 2 9	21,755 2 7	
Jubbulpore Narasimhpur (b) (including Bhanwah Range)		1,746 1 0	1,01,732 12 7	1,04,579 1 1	1,03,675 10 4	2,220 1 9	
Damoh (c)		36,110 2 3	1,09,954 5 8	1,20,454 7 1	1,01,810 8 11	24,603 15 0	
Saugor (d)		9,940 12 5	1,26,775 1 8	1,29,771 14 1	1,18,381 11 11	1,340 2 2	
Hoshangabad (e)		1,114 14 10	1,62,457 5 11	1,61,106 4 9	1,61,915 9 10	860 10 11	
Seoni (f)		1,811 12 0	1,71,100 14 1	1,22,912 10 1	1,21,631 0 0	1,221 10 1	
Ghildwara (g)		1,501 5 4	1,61,110 11 2	1,65,012 0 6	1,62,701 6 10	2,310 9 8	
	Total	1,18,511 15 0	9,72,111 12 9	10,28,871 11 9	9,71,451 7 7	54,321 4 2	
SOUTHERN CIRCLE.							
Direction	Miscellaneous		402 5 3	109 5 3	109 5 3		
Balaghat	Timber and other produce	230 15 0	1,11,616 12 0	1,54,917 11 0	1,11,645 5 6	402 0 0	Includes Rs. 980-48 written off as irrecoverable.
Balaghat Forest School	Miscellaneous		128 11 10	120 11 10	128 11 10		
Bhandara	Timber and other produce		1,11,170 14 11	1,11,170 14 11	1,11,175 14 11		
Bilaspur	Do.		69,778 6 0	69,779 6 0	69,490 14 0	287 7 3	
North Chanda	Do.	2,782 1 7	1,61,548 4 7	1,68,730 6 2	1,58,061 7 1	10,268 15 1	Includes Rs. 28-0-9 written off as irrecoverable.
South Chanda	Do.	1,549 14 6	1,72,184 1 5	1,73,739 5 11	1,71,219 6 5	2,519 15 6	Includes Rs. 200-15-8 written off as irrecoverable.
Nagpur-Wardha	Do.	1,207 8 0	1,73,833 6 10	1,75,035 14 10	1,74,719 6 10	316 5 0	
Raipur	Do.	1,252 13 2	1,16,991 4 7	1,18,217 1 9	1,14,436 14 4	3,810 9 5	Includes Rs. 27-9-1 written off as irrecoverable.
	Total	8,128 4 3	9,64,059 9 11	9,72,187 14 2	9,51,582 6 11	17,605 7 3	
BERAR CIRCLE.							
Direction	Sales of timber and other forest produce and miscellaneous sources.		1,528 7 0	1,528 7 0	1,528 7 0		
Melghat	Do.	9,134 2 0	1,40,882 14 10	1,50,017 0 10	1,42,804 8 10	15,121 8 0	
Amraoti	Do.	100 0 0	1,41,834 7 4	1,47,084 7 4	1,38,983 3 4	5,981 4 0	
Buldana	Do.		1,01,181 6 3	1,09,181 6 3	1,09,068 16 5	112 11 10	
Yemati	Do.	5,818 0 0	2,52,007 8 5	2,57,825 8 5	2,57,825 8 5		
Akola	Do.	200 0 0	1,18,535 1 8	1,18,735 1 8	1,18,705 1 8	30 0 0	
Nimar	Do.		2,75,457 4 1	2,75,457 4 1	2,75,269 2 1	188 2 0	
Betul	Do.	2,185 0 3	1,18,293 12 7	1,30,459 12 4	1,25,777 12 4	82 0 0	
	Total	17,438 2 1	11,96,740 19 8	12,14,118 15 11	11,95,621 6 1	18,526 9 10	
	GRAND TOTAL C. F. AND BERAR	81,450 5 5	51,33,770 4 4	52,13,220 9 10	51,24,755 4 7	90,454 5 3	

*Note.—There is a difference of Rs. 68 between this figure and that shown in Comptroller's Summary which is due to a Refund of Rs. 68 charged in the Treasury Accounts, Raipur, and has adjusted by the Comptroller, Central Province, vide his Objection Statement to the accounts of the Raipur Division for March 1913.

FORM NO. 27.—[PRESCRIBED].—*Outstandings and Liabilities on account of Contractors and Disbursers for the Forest year 1912-13.*

Division	Department Debtor.			Department Creditor.			Balance due.		Remarks.
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year	At close of year.	At commencement of year.	Payments made during the year.	At close of year.	To Department (Out-standing).	By Department (Liabilities).	
1	2	3	4	5	6	7	8	9	10
NORTHERN CIRCLE									
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Damoh	...	52,685 12 11	52,685 12 11	768 7 6	53,168 0 7	54,170 8 1	1,444 11 2	...	
Hoshangabad	...	81,041 6 9	83,041 6 9	9,987 13 10	80,462 0 10	90,449 14 8	7,408 7 11	...	
Jubbulpore	...	30,416 7 2	30,416 7 2	552 10 4	39,374 6 7	39,827 0 11	380 9 9 (a)	...	
Narsinghpur	...	10,580 5 5	10,580 5 5	856 9 11	10,662 2 1	11,518 12 0	934 6 7 (b)	...	
Soni	...	46,441 11 0	46,441 11 0	1,249 13 2	46,731 12 7	48,081 9 9	1,639 14 9	...	
Direction	...	3,823 10 6	3,823 10 6	22 15 4	7,079 7 1	4,001 6 7	177 12 1	...	
Chhindwara	...	38,194 15 9	38,404 15 9	1,622 15 10	39,808 4 1	41,431 3 11	2,936 4 2	...	
Saugor	...	51,081 0 8	51,081 0 8	1,153 12 9	51,441 14 1	52,594 11 0	1,514 10 4	...	
Mandla	...	51,815 13 5	52,815 13 5	5,388 5 11	62,946 9 3	66,774 15 2	12,499 1 9 (c)	...	*On the 31st March 1913. Due to recoveries of advances original made from Mandla Division
North Mandla	...	17,560 1 7	17,560 1 7	...	11,886 9 7	11,886 9 7	5,673 8 0 (d)	...	
South Mandla	...	17,242 3 9	17,242 3 9	...	18,946 1 11	18,946 1 11	1,703 14 2 (d)	...	
Total	...	4,11,211 8 11	4,14,233 8 11	10,597 8 7	4,19,606 5 0	4,30,201 17 7	24,970 4 8	...	
SOUTHERN CIRCLE									
Direction	...	17,404 17 8	17,404 17 8	136 3 4	17,774 1 2	17,910 4 6	505 6 10	...	
Balaghat	...	1,28,231 12 10	1,28,231 12 10	13,972 9 10	1,27,462 1 8	1,41,434 11 6	13,202 14 8	...	
Balaghat Forest School	...	22,877 0 11	22,877 0 11	3,048 3 2	22,566 10 5	19,518 7 3	...	—3,358 9 8	
Bhindara	...	66,438 0 0	66,438 0 0	1,137 11 7	66,216 1 2	67,353 12 9	915 12 9	...	
Bilaspur	...	67,262 2 6	67,262 2 6	5,053 4 3	67,022 11 0	72,076 15 3	4,814 12 9	...	
North Chanda	...	1,39,949 13 0	1,39,949 13 0	4,217 11 5	1,41,508 13 6	1,45,726 8 11	5,776 11 11	...	
South Chanda	...	1,01,448 2 1	1,03,448 2 1	17,736 4 1	96,379 5 7	1,14,115 9 4	10,667 7 3	...	
Nagpur-Wardha	...	89,941 9 1	89,941 9 1	8,602 1 8	86,357 4 0	94,961 5 8	5,019 12 7	...	
Raipur	...	1,20,905 6 2	1,20,905 6 2	4,747 22 1	1,20,467 11 10	1,25,215 7 11	4,310 1 9	...	
Total	...	7,46,458 12 3	7,46,458 12 3	52,557 7 1	7,44,755 12 0	7,68,113 3 1	45,213 0 6	—3,358 9 8	
BERAR CIRCLE.									
Direction	...	20,404 4 2	20,404 4 2	206 6 6	20,421 5 2	20,627 10 8	223 7 6	...	
Amraoti	...	42,767 1 6	42,767 1 6	1,896 1 6	42,883 12 4	44,781 13 10	2,014 12 4	...	
Meighat	...	68,185 1 1	68,185 1 1	1,882 0 5	73,822 13 11	75,704 14 2	7,579 13 1	...	
Yatmal	...	81,446 9 0	81,446 9 0	2,367 9 2	70,993 6 8	82,479 15 10	1,024 6 10	...	
Akola	...	47,212 5 1	47,212 5 1	469 1 10	47,199 0 0	47,668 1 10	455 12 9	...	
Betul	...	84,801 5 5	84,801 5 5	7,817 6 8	82,861 2 2	90,718 8 10	5,917 3 5	...	
Buldana	...	66,814 2 2	66,814 2 2	4,499 4 8	65,756 9 8	70,222 13 11	3,411 11 9	...	
Nimar	...	1,60,400 7 10	1,60,400 7 10	42,299 12 2	1,58,545 14 11	1,86,935 11 1	20,535 3 3	...	
Total	...	5,72,031 4 3	5,72,031 4 3	61,677 9 4	5,71,426 0 10	6,14,138 10 2	41,102 5 11	...	
GRAND TOTAL, C AND BERAR.	...	17,42,723 9 5	17,42,723 9 5	1,33,232 9 0	17,16,818 1 10	18,50,650 10 10	1,12,288 11 1	—3,358 9 8	

(a) Represent figures of the Jubbulpore Division for the whole year and those of the Narsinghpur Division for 3 months April-June 1913.
 (b) Represent figures up to 31st March 1913.
 (c) Do. do.
 (d) Represent figures for a month's work.

